Drug & Cosmetic INDUSTRY

SEPTEMBER, 1950

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HARRY G. KELBLY, Raw Material Editor
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HILDA C. McCOLLOM, Art Director

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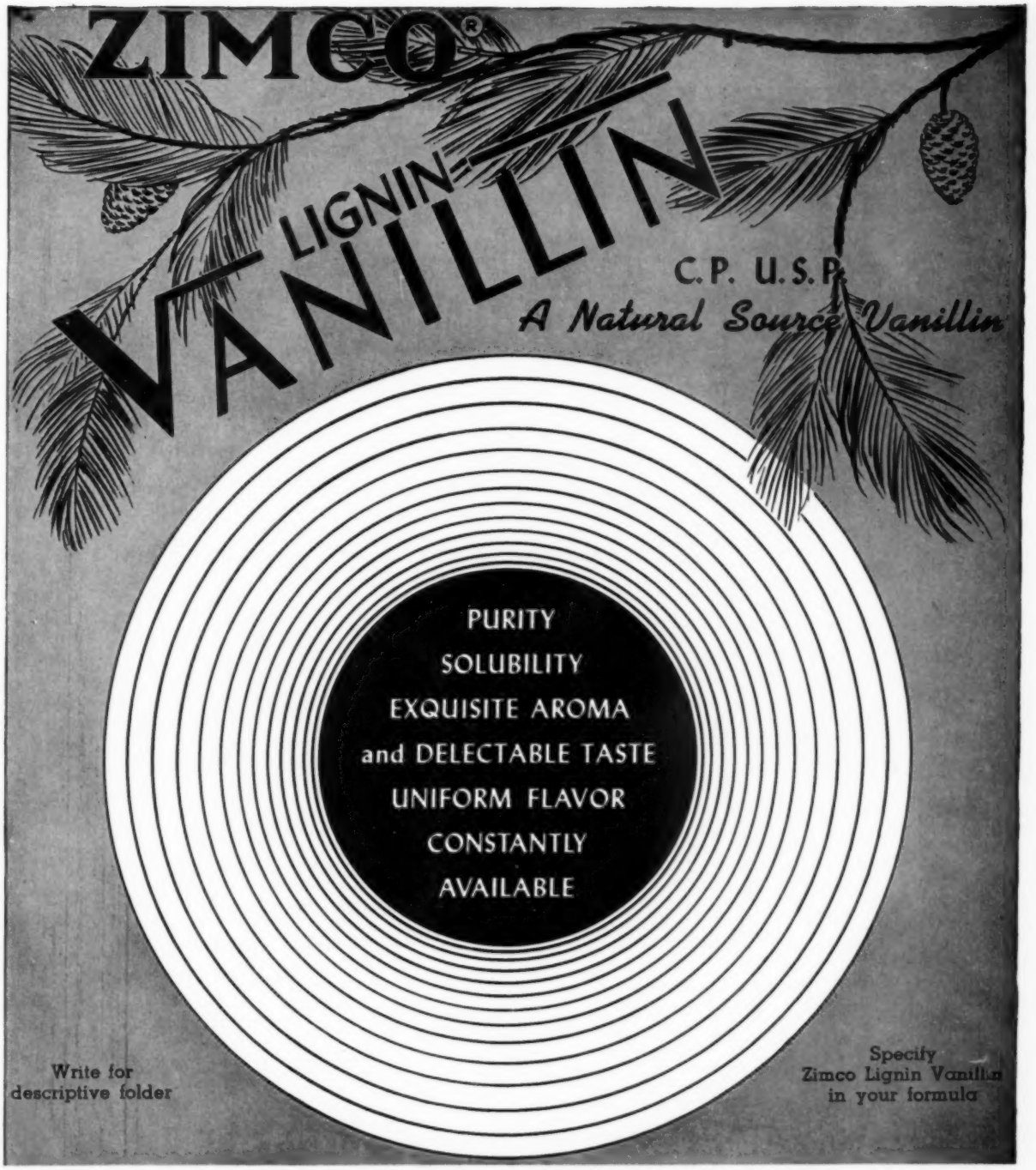

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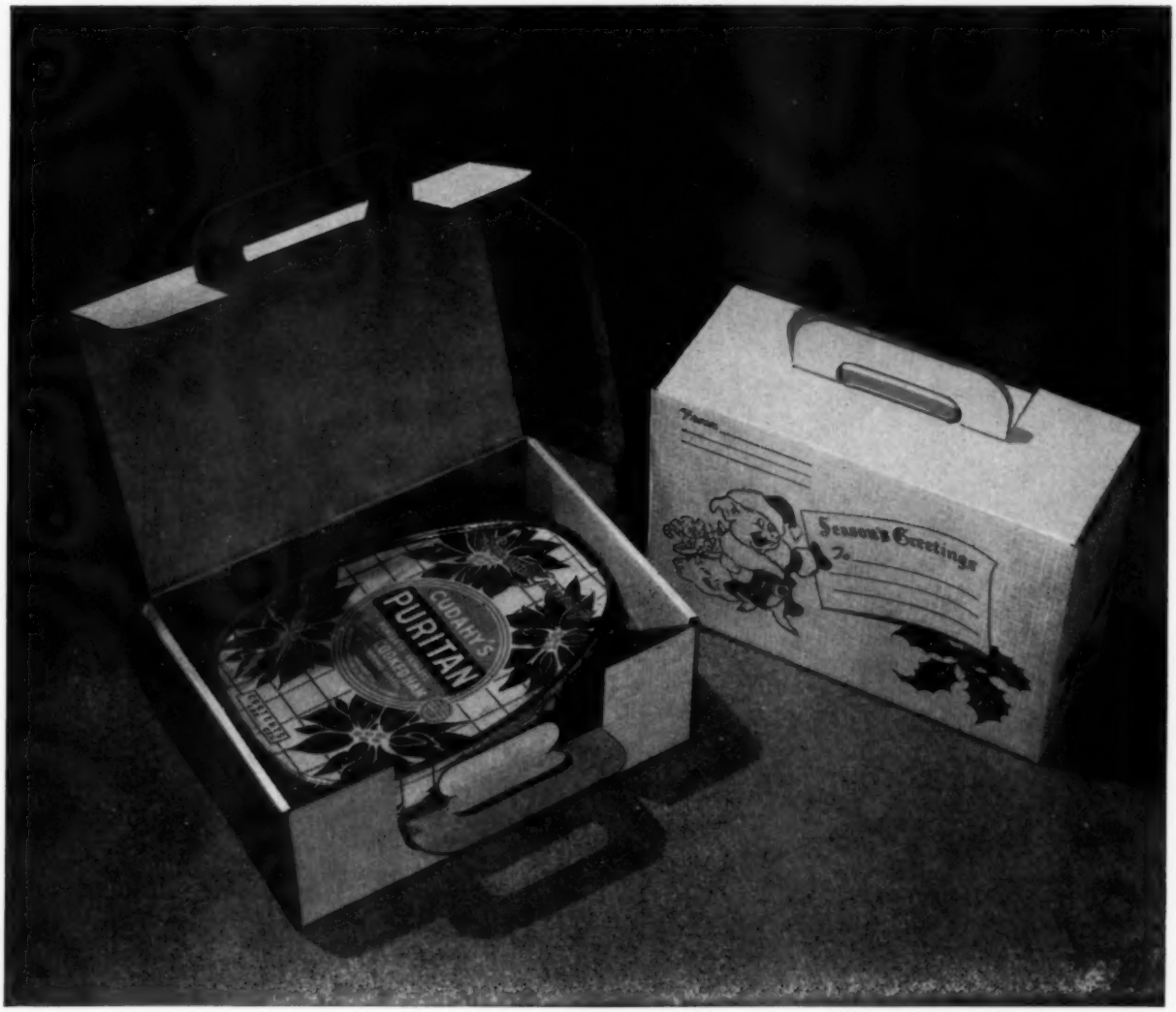

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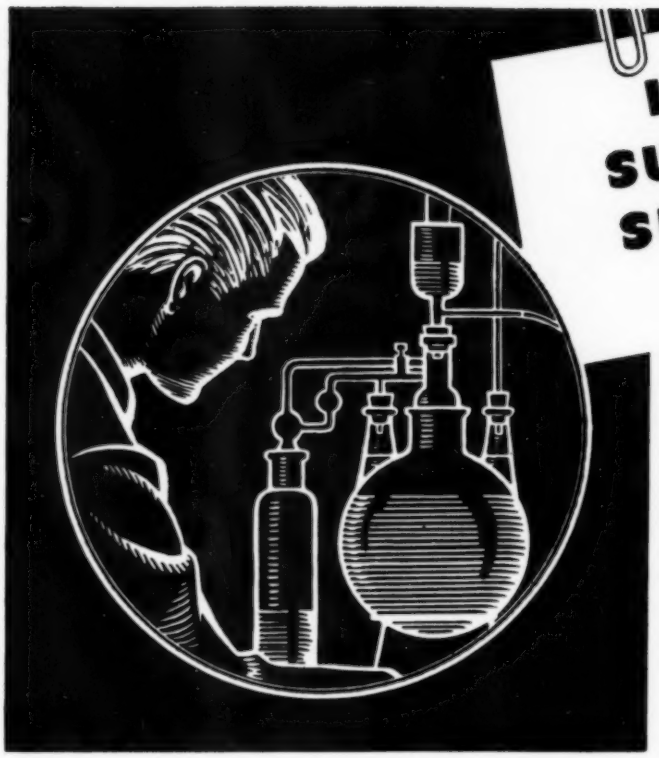

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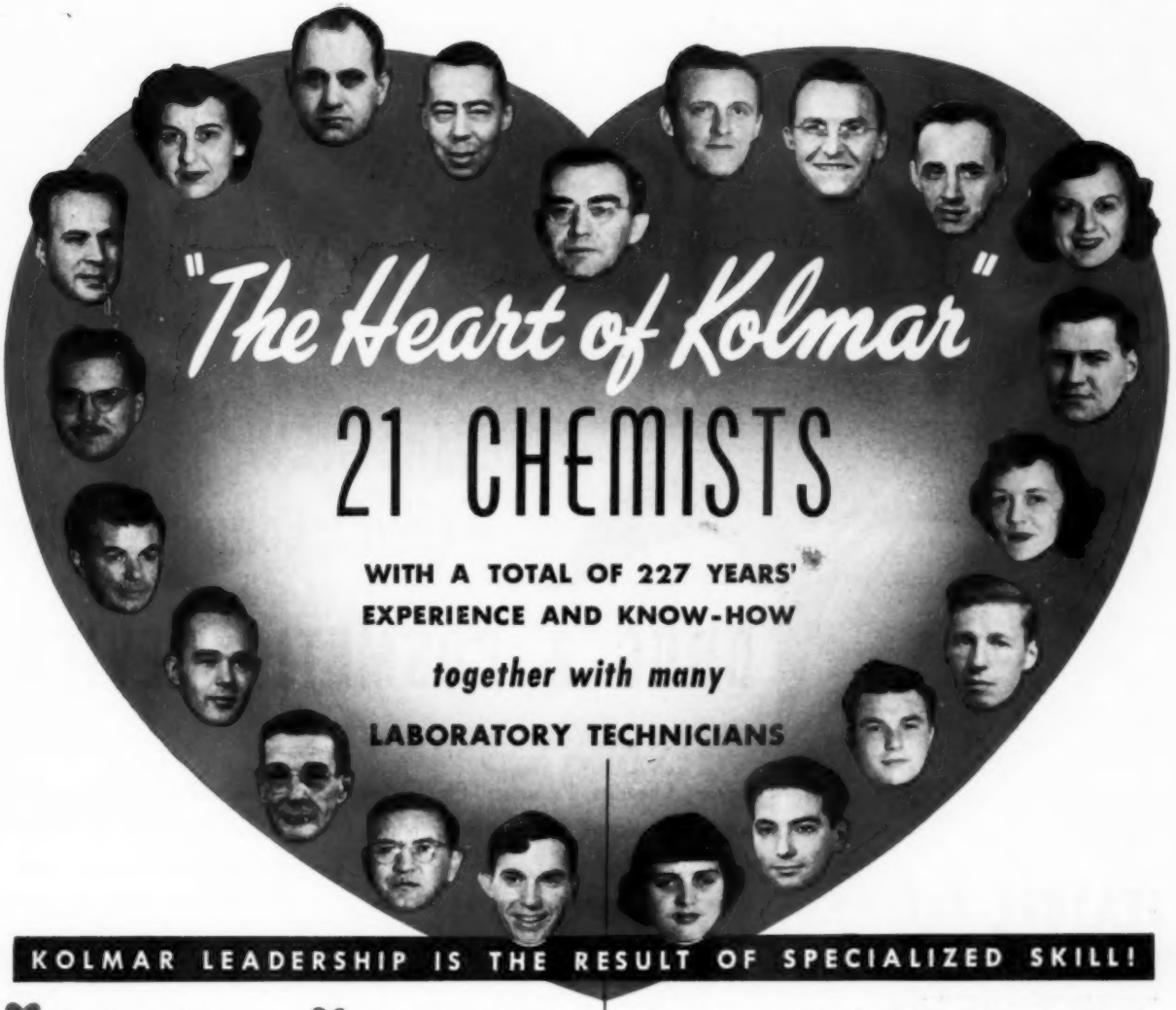

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The customer's rights in the formula under which he operates is always respected by Kolmar. Consultation will not obligate you and there's a Kolmar Laboratory or Representative near to give you prompt service at all times.

•

Kolmar Products include Lipstick, Dry and Cream Rouge, Loose Face Powder, Cake Make-Up, Compact Powder, Foundation Creams, Liquid Make-Up, Eye Shadow, Mascara, Lotions, Colognes, Perfumes and other cosmetics.

•

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The other Monday morning we had our usual weekly powwow – all departmental heads present or accounted for. Of course the usual snake-in-the-grass had to raise its head just when things were going nicely – how to move orders faster through the plant. And of course, as usual, it was "lab and plant control" that got the blame. So, once again we rehearsed step by step the average twenty-odd (?) controls entering into the production of average products.

All were carefully studied. Could any of them be dropped? Or doubled up? Could re-routing save time? Then the subject of special controls for special products was hashed and re-hashed.

"In fact" said Mike, "Control 124-G-8 should be transferred from Special Group Control to Regular Group Control."

He was greeted by a chorus of boos. Why add more red tape? It's red tape that's tying us in knots!

Then from the back of the meeting a lone voice – "Yeah, but our red tape pays off in black figures for the customer!"

And there you have it! Sure control is red tape – but not *needless* red tape! Essentially good pharmaceutical manufacture must be control and when you start to skim it, the cream is off the milk!

Control is red tape, but red tape is insurance – it is safety. And its end result is the *better* product that started in this cradle of creative formulation. Your order may be a little slower "coming through," but the red tape will pay off in black figures for you in the long run.

GEORGE MILLER
PRESIDENT

P. S. I'll tell you what we have *eliminated successfully – production worries for a lot of companies. Now they're concentrating 100 per cent on sales, and* are they doing it!

Strong Cobb & Co. Inc.
2654 Lisbon Road, Cleveland 4, Ohio

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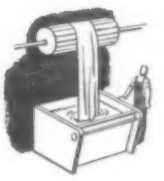

When your research or production programs indicate need for an inexpensive, water-soluble aluminum compound, investigate the advantages of B&A Aluminum Chloride Solution. As a raw material or treating agent, it may prove the key to your process problems, particularly those requiring a material low in iron, arsenic, and heavy metals.

This superior B&A Fine Chemical is notable for its clarity and high purity. It is readily available as a 32° Baume solution, containing not less than 50.3% $AlCl_3 \cdot 6H_2O$. Its quality and uniformity are maintained through rigid laboratory control during production . . . your assurance of another B&A Fine Chemical made to meet the most exacting requirements.

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- As a carbonizing agent for wool
- As a hardening ingredient of photographic fixing baths
- For purification of glycerine by-product of soap manufacture
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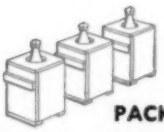

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If your answer is yes to any of these questions it is time to use PENICK'S ABSOLUTE ALTERNATES. Inquire for samples of:

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(REQUIRE NO ALCOHOL)

ORBIS "AQUASPRAY" PERFUME OILS are recommended for the preparation of sprays for deodorizing and purifying foul air in homes, institutions, hospitals, theatres, etc. They require no alcohol.

By merely mixing 3 ounces of Aquaspray Perfume Oil and 3 ounces of Formaldehyde Solution U. S. P. with sufficient water to make 1 gallon, a spray in a permanent milky emulsion form is obtained at a finished cost of less than 38 cents per gallon.* This is a real profit producer.

*Based on the gallon price of "Aquaspray."

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Apple Blossom	Gardenia	Mint	Pineneedle
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PRICE: $2.00 per pint, $14.00 per gallon

A request on your letterhead will bring further details and sufficient sample for 1 quart of finished spray.

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COSMETIC RAW MATERIAL
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four aromas for fine products

Where fragrance and flavor are sales builders . . . where undesirable odors or tastes must be masked . . . you can count on Monsanto's aroma and flavor chemicals to give you results efficiently and economically.

There are four Monsanto aroma and flavor chemicals — Ethavan, coumarin, methyl salicylate and vanillin. All are made to highest quality standards and even exceed U. S. P. in some specifications. All have the absolute uniformity possible *only* with synthetics, making it easier for you to get uniform results in your formulations. All have "staying power" that holds through hot or cold processing . . . through transportation and storage. Thus Monsanto aromas and flavor chemicals help inspire first purchases . . . help deliver customer satisfaction . . . help create repeat sales.

In addition to these flavor and aroma chemicals, Monsanto offers saccharin . . . *the perfect sweetener* . . . most economical sweetener for drug products. One pound of the soluble powder is equal to 30 pounds of sugar. Saccharin Monsanto will not ferment or spoil. It adds no weight.

Specify Monsanto aroma and flavor chemicals next time you order. Mail the coupon or contact the nearest Monsanto Sales Office for data and a copy of the interesting and useful booklet, "Something About The Senses." Use the handy coupon or contact the nearest Monsanto Sales Office. MONSANTO CHEMICAL COMPANY, Organic Chemicals Division, 1732-J South Second Street, St. Louis 4, Missouri.

Ethavan Reg. U. S. Pat. Off.

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1732-J South Second Street, St. Louis 4, Missouri

Please send: .....Booklet, "Something About The Senses"; .....Data, Ethavan; .....Data, coumarin; .....Data, methyl salicylate; ..... Data, vanillin; .....Data, saccharin.

Name ..... *Title* .....
Company .....
Street .....
City ..... *Zone* ..... *State* .....

SERVING INDUSTRY . . . WHICH SERVES MANKIND

Wanted:

I want a job selling perfumes and cosmetics.

I know the cities and towns where these products are sold in worthwhile volume, where all the capable, energetic retail sellers of cosmetics are located, and where the sales expense of calling will return a profit.

When I enter the store of any of these retailers, I am sure of a welcome based on long, friendly associations. I know the folks who do the buying; more important I know the folks who do the selling. I know how to get the attention of these folks, how to get my story over without stepping on anyone's toes.

I want to do more than just send you an order which would only mean that your goods are at rest in that store. I like to sell and my idea of selling is to keep your goods moving through the store to Miss and Mrs. Public.

I would expect you to give me a clear, concise story of your product—its quality, competitive advantages and selling points. I would need to know your advertising program, so that I can build up in the mind of these retail folks the expectation of substantial consumer interest. I want also to know about your company policies so that I can win friendly admiration for your products and your company.

I can sell perfumes and cosmetics because I know the people who in turn sell them to the public.

Let me carry the kind of message which encourages retail display for your product and friendly, informed selling behind the counter and you will soon see results in increased retail orders.

I have been selling perfumes and cosmetics for over 33 years. Any good retailer will give you a reference.

My name is BEAUTY FASHION:

Do you need a top-notch, tested, retail salesman?

"I want a jar of hormone cream . . . for my aunt."

KEEPING POSTED

A. M. A. Advertising Program

THE American Medical Association is now going directly to the public through newspaper, radio, and national magazine advertising in an effort to convince the public that compulsory health insurance is bad, and that voluntary insurance is good. The advertising budget approved by the AMA Board of Trustees totals $1,110,000, with $560,000 allocated to newspapers, $300,000 to radio, and $250,000 to national magazines. The Association states that "approximately 144,500 individual doctors, in every community in America, will share the cost of this advertising program through their dues in the AMA. One of major purposes of the ad copy will be to increase the availability of medical care to all the American people through extended use of the medium of Voluntary Health Insurance."

Eleven thousand newspapers, including every bona fide daily and weekly paper in the 48 States, the District of Columbia, and the territories of Hawaii and Alaska, will carry this advertising. More than 300 radio stations and approximately 30 of the leading national magazines, in addition to a score of advertising trade publications will be used. The radio and magazine campaigns are scheduled for October. According to the AMA the copy is designed to sell:

"The commodity which the AMA copy will advertise is an already widely-accepted, thoroughly-recognized, American product—Voluntary Health Insurance. The AMA ad copy will not seek to sell any particular brand or plan of Voluntary Health Insurance, but the individual will be encouraged to secure sound coverage in the plan which he feels best suits his individual needs. There are several hundred prepaid medical-hospital systems and accident and health insurance companies in the United States, all competing for business in this field, in addition to the various labor, industrial and fraternal plans—and every sound system of Voluntary Health Insurance should benefit from the AMA advertising program."

Penicillin Dentifrice

PENICILLIN has finally found its way into a dentifrice—as predicted by penicillin's discoverer, Sir Alexander Fleming slightly more than five years ago. However, the product has not been released for over-the-counter sale and is available on prescriptions of dentists only. Called Dentocillin, the product in tooth powder form is being made and marketed by the Drug Division of the Andrew Jergens Company. It retails at a fair trade minimum of $1.00 per bottle. Promotion is being conducted by means of direct mail distribution of "factual information," a nation-wide sampling campaign among dentists, exhibition of the product at state, regional, and national dental society meetings, factual news articles in magazines and newspapers, and dental journal advertising. A Jergens official said: "Druggists may expect prescriptions in quantity for Dent·cillin, not only for controlling tooth decay but for treatment of gingival disease in which penicillin therapy is widely used and for which Dentocillin may be the most convenient form of application."

Five years of development and research by the staff of Tufts College Dental School, Boston, financed by Jergens have gone into the product. Effects of the product were studied at Tufts over a two year period on 400 school children ranging from five to fourteen years in two elementary schools of Walpole, Mass., All the children selected from similar economic and racial backgrounds, brushed their teeth once daily in the classroom under close supervision, one group unwittingly using Dentocillin and the other the same powder without penicillin for the two year period. Thorough dental examinations made at the start of the study, at the end of the first year, and at the end of the second year showed that the group using Dentocillin developed 55.3 per cent less cavities in the first year, and 53.8 less cavities in the second year, than the other group. Testing 3,416 penitentiary inmates and 1,064 private dental patients established that no serious reactions were obtained with the use of Dentocillin even in people with known and proved sensitivity to penicillin.

New Members for Fair Trade Council

THE American Fair Trade Council recently announced that fourteen more manufacturers have become members. New members in this industry are: Revol Products Corporation, Lanvin-Parfums, Inc., Caron Corporation, and Tampax, Incorporated.

Governor Dewey and Medical Care

"AND if Washington did get control (of health and medical research) nobody would ever know whether the Federal wholesale purchase of drugs for the masses of our people was determined by doctors or by the five percenters," said Governor Thomas E. Dewey, at the recent dedication of the Sterling-Winthrop Research Institute.

Governor Dewey said that no citizen of the 15 million in New York State need go without medical care because he cannot pay for it. "This had been achieved through the voluntary hospitals, most of which are religiously sponsored, the local and state hospitals, and by reason of the magnificent free contribution of our doctors' work in clinics," he said. "Right now, one million people in this State receive free medical care every year at a total cost of some $90 million in local, state and federal funds. More than one-third of the entire operating budget of this State goes for the care of the 105,000 mental patients, and it is good care . , . If tuberculosis is discovered, there is free hospitalization until cured for all who need it."

Diet Aids and The FDA

RECENTLY the Food and Drug Administration commented on diet aids as follows:

"The diet aids in the form of expensive tablets or 'candy' are not in the dangerous class, but how much good are they? They work for the person who does not have much of an appetite, but the big eaters will happily consume the diet aid and eat too much food as well. Only the diet can do the trick."

The FDA also commented that in considering diet aids a determination must be made whether the product is a true appetite-depressent drug which is believed to belong to the class of products which should be, in the opinion of FDA officials, used only under the direct supervision of a physician, or is the product an appetite-curber, which is designed merely to take the edge off the appetite, and which belongs in the class of preparations used as a part of various reducing plans.

New Product Promotion

WHEN a manufacturer in this industry undertakes a new product, says Allen Klein, the advertising manager, president, medical director get all excited; the detail or sales staff is ordered to put most of its effort on the newcomer; the advertising agency is told to prepare advertising copy for publication, direct mail, and other forms of advertising; BUT promotion on all other products comes practically to a standstill. Almost all money and efforts are concentrated on the new item, he points out, while good profit-makers which gained their standing after a long, hard pull, are allowed to coast along for several months with little or no push.

This, he contends does not make much sense. "Unless the firm's resources do not permit the promotion of both the new and old products, it is entirely without logic. And, if a manufacturer is not financially able to get a new product going without the bread-and-butter items paying the penalty, why issue a new product—unless, of course, the new item is *red hot*. The promotion of new products at the expense of the old is being perpetrated by firms that know—and can afford—better. In the first place, what is the rationale for letting competitors steal your chickens while you keep all eyes on the new rooster . . . hard won markets are all too easily lost. In the second place, why confuse new products with old. One should have nothing to do with the other: each new product is a business in itself and deserves a marketing and advertising campaign of its own.

"It is my earnest belief—new products or not—that every major, worthwhile preparation on a company's list should receive its own individual attention and budget, and be treated as a business of its own within the scope of the larger business. I do not say this simply as an advertising man who wants to see advertising schedules stepped up. It's just plain common sense, at least to me."

Reader's Digest Objects

THE Reader's Digest is finding that it is becoming too important to advertisers as an authority on drugs and cosmetics, and it is finding the situation rather embarrassing. Therefore, the Digest to explain its rather awkward position in the forthcoming issue. The statement to appear at that time reads as follows:

"In advertising their products in the press and on the air, a number of manufacturers have recently quoted from or referred to Reader's Digest articles. The phraseology and layout of certain advertisements have misled readers into believing that the Digest has endorsed the product being advertised. In other instances, by taking statements out of context, an appearance of Digest approval has sometimes been obtained even where the whole tenor of the article was thereby falsified.

"Permission to quote from articles discussing consumer products is not granted to advertisers by the Digest. But the Digest cannot legally prohibit an advertiser from referring to a statement made in the Digest, so long as there is not a direct quote and the reference is not false.

"There is strong evidence of popular resentment over the misleading claims of a few advertisers. Advertising has an important role in our economy. It is to be hoped that the advertising profession itself, normally adhering to high ethical standards, will take steps to curb the subtle misrepresentations by which some advertisers have sought to use the name of the Reader's Digest to promote sales of their own products."

While we have no idea why the Digest suddenly became indignant over the extent to which it has been quoted as a medical authority, we thought it a little strange that dentifrice manufacturers other than Colgate should take a free ride on a Digest article reporting certain results from research paid for by Colgate, and performed with Colgate's dentifrice as the material on which the report was based.

Of course, the Digest probably doesn't blush because it is credited with putting over antihistaminics, ammoniated dentifrices, and many other new items, to say nothing of a forthcoming article which is expected to give the needed push to the chlorophyll deodorants, but it probably likes to keep this sort of activity under control and not let the advertisers grab the ball and run with it themselves.

However, as the Digest has probably already discovered—but too late—when they try and set themselves up as an authority in the drug and health field, they are entering an activity upon which many smart people have floundered badly in the past. After all, good health is a direct concern of everybody, not just the owners or readers of Reader's Digest, or of any other relatively small group. And so far as the reference of the Digest to attempts of advertisers in this industry

attempting to mislead through references to articles appearing in the Digest is concerned, more than one of the articles in the Digest have misled without any help on the part of advertisers in this industry.

Bill Would Curb Seizures

LEGISLATION designed to curb sharply the multiple seizure powers of the Food and Drug Administration in cases of misbranding was introduced in the House last month by Representative Clyde Doyle of California. The bill (H.R. 9466) was referred to the House Interstate Commerce Committee. The bill results from the recent FDA seizure action against the manufacturers of Neutrilite on charges that certain literature used in selling the product caused it to be considered misbranded in that the labeling thus became "misleading to the injury or damage of the purchaser." This case—the Mytinger & Casselberry Case—was fully reviewed by James B. Goding in our July issue, page 34. Suffice to say here that after a specially convened three-judge statutory court sharply criticized the FDA and held that such multiple seizures were unconstitutional, the U. S. Supreme Court reversed this decision and decided for the FDA.

The amendment to the Food, Drug, and Cosmetic Act which Mr. Doyle's bill would enact would allow multiple seizures of misbranded articles only in cases where the product or its labeling had already been judicially determined to be misbranded, or where there was probable cause to believe that the product was dangerous to health. Multiple seizures on the grounds that the labeling is fraudulent, or the labeling is misleading to the injury or damage of the purchaser, would be prohibited by the amendment.

It strikes us that any such amendment as is proposed by Mr. Doyle would rather hamstring the FDA and would eliminate much of the activity under the Food, Drug, and Cosmetic Act, which since its enactment in 1938, has raised the labeling of the products of this industry to a new high of integrity and reliability greatly to the benefit of both the public and this industry.

Antibiotic Regulations Changed

CHANGES were made last month by the Food and Drug Administration in regulations for certification of antibiotics so as to bring these regulations into conformity with the latest developments in production of penicillin and streptomycin. The order provides for certification of procaine penicillin vaginal suppositories, dihydrostreptomycin ointment, and crystalline penicillin O (sodium and potassium), and for revocation of the requirement that the labels of ephedrine penicillin tablets shall bear a statement that the drugs should be administered only by a physician, dentist, or veterinarian.

Marketing of penicillin tablets containing two or more sulfonamides was authorized by the FDA. This authorization is contained in a revision of the antibiotics regulations providing for certification of such products.

Citric Acid Price Frozen

THE price of citric acid has been frozen at its present levels for a period of one year ending August 31, 1951 by Chas. Pfizer & Co., the world's largest producer of this chemical. This is in line with similar action taken by Pfizer with reference to the price of citric acid in the early stages of World War II before the establishment of price control under the OPA.

New York APMA Headquarters

THE new Headquarters Office of the American Pharmaceutical Association is now in full swing at 500 Fifth Avenue—the corner of Fifth Avenue and 42nd Street, New York, under the direction Dr. John O'Neill Closs, Executive Secretary of the Association. Tom Daly, who has been with the Association for 31 years, has been appointed Office Manager, and Mrs. Marie Fiorentine is serving as Dr. Closs' secretary. The telephone of the new office is LOngacre 5-3552.

Fair Trade Handbook Revised

THE National Wholesale Druggists Association has completely revised its handbook, "The Basis and Development of Fair Trade," and it will be ready for distribution within the next month or so. The earlier edition of the book published in 1946, was the first republication of the work since its inception some ten years prior to that. Harold Harper, NWDA counsel who prepared the previous revision, has completed the present one. Sections have also been written by NWDA Executive Vice-president Dr. E. L. Newcomb and by NWDA Executive Secretary E. Allen Newcomb. The book is described as a "compendium of the economics and law of fair trade." It contains an interpretative analysis of all court decisions on fair trade laws, samples of fair trade laws and other laws relating to fair distribution, and model fair trade contract forms.

F.T.C. and Hair Dyes

THE Federal Trade Commission has modified a Cease and Desist Order, striking provisions which required the manufacturer to stop disseminating advertisements of its three hair coloring preparations which the Commission had, in 1945, found were false because they did not reveal by use of a caution statement that these preparations are potentially dangerous. After determining that the labels on the containers bore the caution statement in compliance with the provisions of the Food, Drug, and Cosmetic Act, the Commission said:

"The record further shows that the Commission, on November 24, 1948, acting under its statement of policy promulgated on December 11, 1946, as amended on March 2, 1947, determined that it would not thereafter consider any advertisement of a coal tar hair dye of the "para" type as false merely because of the failure of such advertisment to reveal that the preparation is potentially dangerous by reason of its paraphenylenediamine content when the label on such preparation bears such a statement and when the accompanying directions are adequate for the preliminary testing."

In line with this policy of the Commission, provisions in stipulations requiring cautionary statements in advertisements of hair coloring preparations are also rescinded.

H. I. F. Citizens' Advisory Committee

HERBERT HOOVER, who is chairman of the Citizens' Advisory Committee of the Health Information Foundation, has announced that the members who will serve on the committee with him are: Dr. Karl T. Compton, chairman of the board, Massachusetts Institute of Technology; Donald W. Douglas, chairman of the board, Douglas Aircraft Company;

Dr. Lee A. DuBridge, president of California Institute of Technology; Ferdinand Eberstadt, president of F. Eberstadt & Co.; Mrs. Hiram C. Houghton, president, General Federation of Women's Clubs; Allan B. Kline, president of the American Farm Bureau Federation; and Lewis L. Strauss, financial advisor and consultant to Rockefeller Brothers, Inc.

Labeling is Factual

RECENTLY the Circuit Court of Appeals upheld the District Court's judgment condemning a misbranded ulcer remedy. In answer to the defendant's claim that the Food, Drug, and Cosmetic Act does not authorize the Food and Drug Administration to decide medical questions, the court replied:

"There is not presented here a mere difference of opinion between two schools of doctors. The question of whether the labeling on a drug is 'false and misleading in any particular' is a question of fact, and the test to be applied is whether the drug is effective in curing, or in giving relief from, the disease for which it is recommended. Upon this question the witnesses for the government made tests of the remedies, analyzed the product, and in some cases administered it to their patients. Their testimony was based upon such scientific knowledge so acquired. The question was, therefore, one of fact for the trial court to decide in the first instance."

Cortisone Price Almost Halved

CORTONE—the Merck brand of Cortisone has been cut in price by close to fifty per cent, the new price being $50 per gram, against a previous price of $95 per gram. This latest price reduction is the fifth in a series which have brought the selling price to one quarter of the initial investigational price of $200 per gram. The Company explains that the new price has been made possible "through intensive effort by the company's development, engineering, and production groups to improve the extremely complex process and thus to lower manufacturing costs and greatly increase production." Good supplies of Cortone are available to more than 6,500 hospitals with facilities to meet certain requirements. For the present, the drug is to be used, during the initial period of treatment, only in patients treated in these institutions. After initial treatment, the physician may provide continued treatment in his office or the patient's home.

In rheumatoid arthritis cases, patients being administered cortisone may be placed on a maintenance dose of 100 milligrams per day, following a day or two of higher dosage. Often this maintenance dosage is reduced until, in many cases, no more than 100 milligrams every other day need be taken. Thus, at the new price, the cost to hospitals for material for maintenance dosage is $2.50 to $5 per day. The treatment of some other important disease with cortisone requires only several days or a few weeks, and in these cases, many patients can be controlled with a total amount of the drug not exceeding one gram.

It is most pleasant to see this important drug being priced consistently lower with the end in view that it will be readily available to all who are in need of it. In the Merck organization, the combined efforts of teams of specialists from research and development, as well as of factory chemists and chemical engineers have made possible many major improvements in the complex manufacturing process for producing cortisone. Significant yield increase, principally from the efforts of the developmental research group under the direction of Dr. Max Tishler. The company's research program is also directed toward investigation of raw materials other than ox bile, with total synthesis as a possible goal, in an endeavor to lower costs still further.

Medical Care and Income Taxes

THE deduction of expenses for medical care in computing Federal income taxes is becoming a subject of litigation. Long fought for as a deduction from taxable income on the theory that charges for repairs and maintenance of plants and equipment were deductible, and medical care expenses are charges for care and maintenance of the individual who produces income, this deduction was not included in the tax bill until 1942, and then only to a limited extent. As most tax payers know, medical expenses can only be deducted to the extent they exceed 5 per cent of a person's income, with a fixed upper limit of $1,250 on separate returns and $2,500 on joint or family head returns.

In the eight years since the inception of this deduction, not many court decisions have been handed down interpreting this provision of the tax law. Recently, however, an interesting case was decided. L. Keever Stringham lived and worked in Ohio. His small daughter had suffered from birth from respiratory ailments and had been hospitalized several times. After discussing the situation with the family doctor, her father sent her to an open air school in Arizona where she improved in health rapidly.

In his tax return for 1944, Mr. Stringham deducted medical expenses, her transportation to Arizona and school bills. The Commissioner of Internal Revenue disallowed all but the doctor bills and the cost of medicine. The U. S. Tax Court, however, also allowed costs of her transportation and estimated living costs of the child at school. It disallowed only the portion of the school bills estimated to represent educational costs. The Appeal Court upheld this decision. However, the court warned that each case of this kind must be decided on its particular facts, and this one decision does not create a rule of thumb method of determining the applicability of the term, medical care, to all cases which might arise. From decisions handed down thus far it is certain that medical expenses are deductible only for the cure or mitigation of specific diseases or illnesses, and trips to Florida or anywhere else which your doctor thinks will do you good don't count.

Packaging Problem Answers

THE Packaging Institute, holding its Twelfth Annual Forum October 23 to 25 at the Commodore Hotel, New York, has developed a program that "will endeavor to be enlightening to members on packaging problems entailed by a snowballing national mobilization effort," says Program Committee Chairman, E. H. Balkema of Colgate-Palmolive-Peet Co.

"Shortages are, however, not entirely attributable to the Korean situation and its consequences," says Mr. Balkema. "The shortages brought about by strikes, such as the one in soda ash production, are factors of almost equal consequence in forward planning. Smaller glass users have facing them an unhappy supply future and some of them have already reported inability to obtain containers of this type. For these reasons the program of the Forum is planned to bring together a number of competent observers to present the outlook for pack-

aging supplies as of October 23, 1950. But, regardless of military demands and domestic problems imposed by strikes, life must go on and goods must continue to be packaged.

"Our program will devote more than half of its available time to the advances in packaging science and technology.

"President Charles L. Barr will reveal for the first time some very fundamental figures regarding packaging developed by the studies conducted by the Packaging Institute. Those who have had access to these figures regard them as almost unbelievable but their very numbers and constancy reveal a hitherto unrecognized fact: Packaging is a bigger job for most companies than production of the goods to be packaged. Yet packaging is often unrecognized and often not adequately controlled and coordinated."

Lee R. Forker, of Quaker State Oil Co., long known in the National Association of Purchasing Agents for the accuracy of his forecasts of available supplies of packaging materials, will, with the assistance of a panel, evaluate the whole packaging outlook. John A. Warren of American Home Products, heads a panel of four production men who, not only have put high speed packaging lines into operation, but have solved difficult problems in doing it. Panel members have been selected from four fields of packaging: glass lines, can lines. carton lines, and squeeze bottle lines.

Important Fair Trade Decisions

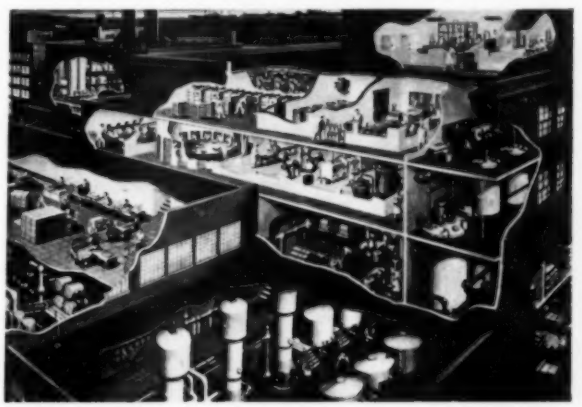
A MANUFACTURER engaging in interstate commerce does not violate the Sherman Act in maintaining minimum resale prices against a non-contracting reseller where permitted by a state Fair Trade law, according to a decision handed down last month by the U. S. Circuit Court of Appeals for the Fifth Circuit. The Miller-Tydings Act merely states that nothing in the Sherman Act will render illegal "contracts or agreements" valid by state law, and does not specifically incorporate as an exception to the Sherman Act the provision of the state Fair Trade Acts binding non-contracting resellers. But the court answered the plea of the defendant that the Miller-Tydings Act does not extend to resale price maintenance against non-contracting resellers, by holding that the Miller-Tydings Act neither authorized nor prohibited state Fair Trade Legislation, but does amend the Sherman Act to permit effective state legislation binding upon both contract signers and non-contracting dealers. The court pointed out that although the sales involved were intrastate, the transactions so affected interstate commerce as to bring the plaintiff's activities within reach of the Sherman Act, unless the Miller-Tydings Amendment excluded them.

One of the three judges dissented, reasoning that the Miller-Tydings Act should be strictly construed. He maintained that Congress has only legalized the "contracts or agreements" validated by state law, but has not excepted from the operation of the Sherman Act all provisions of the state Fair Trade Acts. He stated that the non-signatory provision was not a "contract or agreement," but substantive law, and was not excepted by the Miller-Tydings Amendment.

Another important decision affecting Fair Trade Acts was also handed down last month, this time by a Federal district judge in Philadelphia who ruled that cooperatives are bound under the Fair Trade Act. In addition to enjoining the Civil Service Employees Cooperative Association from selling Sunbeam Corporation products below minimum prices established by Fair Trade contracts, the court ordered the cooperative to turn over to Council-member Sunbeam Corporation all profits from the sale of appliances to its approximately 30,000 national members at discounts of 20 to 30 per cent below minimum retail prices. This affects sales made by the cooperative since its incorporation in March 1949.

Publicizing Penicillin Manufacture

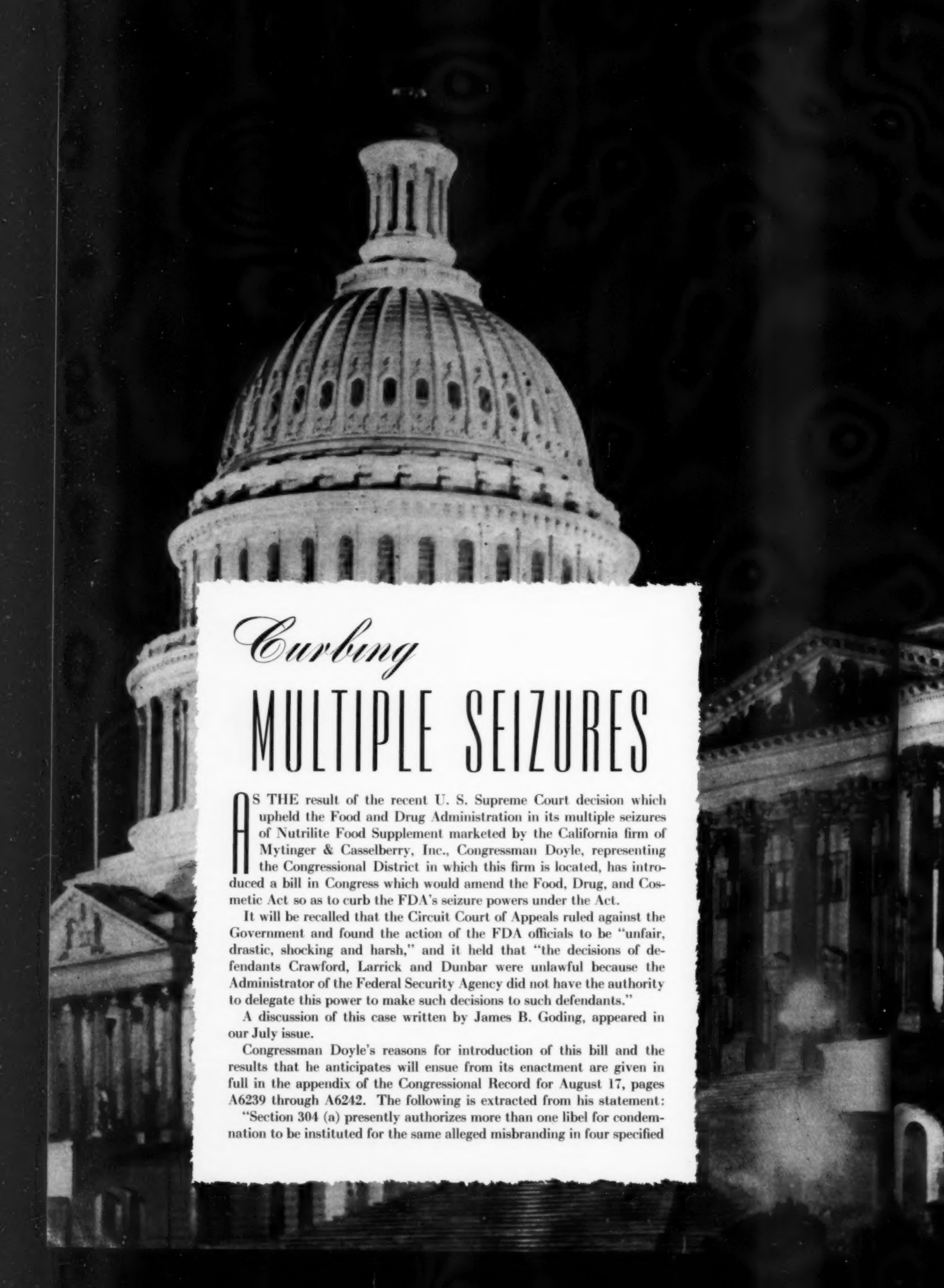
ALTHOUGH the general public is well acquainted with the miraculous powers of the antibiotics, and speak of their use and efficacy freely, they have very scant, or practically no knowledge of how these drugs are produced. Because the public only knows that volume production of these drugs was accomplished by American ingenuity, and nothing further, the Armstrong Cork Company in cooperation with the American Pharmaceutical Manufacturers' Association is running in the September 23 issue of the Saturday Evening Post a four-color full page advertisement designed to give the public an understanding of the processes and facilities necessary for production of one of these drugs—penicillin. Carrying a cutaway view of a typical penicillin plant, the copy reads in part:



"The wonderful new drugs like penicillin aren't really manufactured—they are grown. They are produced by molds, microscopic plants that the drug manufacturer grows and harvests something like a farmer grows and harvests grain. This new type of 'farming' is the most scientific and carefully controlled that you could possibly imagine. Only when the molds are given just the right kind of food and just the right temperature will they multiply rapidly and produce penicillin.

"Making penicillin starts in the laboratory where the best mold strains are kept dormant at 50° in a refrigerator. Less than a thimbleful is transferred to flasks of feeding solution. There the mold starts to grow with astonishing rapidity. Soon it's put in tanks, then into 10,000 gallon fermenters insulated to hold them at exactly 75°. Those 10,000 gallons produce only 10 to 15 pounds of penicillin.

"To separate the penicillin, the mold is filtered off. Then a solvent is added to combine with the penicillin. This mixture is whirled off in separators. From here on, manufacturing areas are kept absolutely sterile and air conditioned at 70°. The penicillin is removed from the solvent by evaporation or by freezing. In the freezing method, glass vials of drug and solvent are frozen in a room that's 70° below zero. The room can be kept that cold because its built almost entirely of corkboard. The solvent is then drawn from the frozen liquid in insulated vacuum chambers, and the penicillin powder that is left is packaged."



Curbing MULTIPLE SEIZURES

AS THE result of the recent U. S. Supreme Court decision which upheld the Food and Drug Administration in its multiple seizures of Nutrilite Food Supplement marketed by the California firm of Mytinger & Casselberry, Inc., Congressman Doyle, representing the Congressional District in which this firm is located, has introduced a bill in Congress which would amend the Food, Drug, and Cosmetic Act so as to curb the FDA's seizure powers under the Act.

It will be recalled that the Circuit Court of Appeals ruled against the Government and found the action of the FDA officials to be "unfair, drastic, shocking and harsh," and it held that "the decisions of defendants Crawford, Larrick and Dunbar were unlawful because the Administrator of the Federal Security Agency did not have the authority to delegate this power to make such decisions to such defendants."

A discussion of this case written by James B. Goding, appeared in our July issue.

Congressman Doyle's reasons for introduction of this bill and the results that he anticipates will ensue from its enactment are given in full in the appendix of the Congressional Record for August 17, pages A6239 through A6242. The following is extracted from his statement:

"Section 304 (a) presently authorizes more than one libel for condemnation to be instituted for the same alleged misbranding in four specified

instances: (1) When the alleged misbranding has been the basis of a prior judgment in favor of the United States; (2) Where the Administrator of the Federal Security Agency has probable cause to believe from facts found, without hearing, that the allegedly misbranded article is dangerous to health; (3) where the Administrator has probable cause to believe from facts found without hearing that the labeling of the allegedly misbranded article is fraudulent, and (4) where the Administrator has probable cause to believe from facts found without hearing that the labeling of the allegedly misbranded article would be in a material respect misleading to the injury or damage of the purchaser or consumer. These provisions are the so-called multiple seizure provisions of the Food, Drug and Cosmetic Act.

"Experience has shown that in many instances so-called multiple seizures under questionable circumstances have proved to be a harsh and drastic remedy. This is particularly so where multiple seizure campaigns by the Food and Drug Administration have been instituted under Nos. 3 and 4 above, to wit, where it is claimed that the labeling is fraudulent or misleading.

"It is obvious that more than one seizure action should be permitted where a product or its labeling has already been judicially found to be misbranded. A shipper who continues to use labeling which has already been judicially condemned should have no right to protection against further legal action based against the product or its labeling.

"The present provisions of section 304(a) authorizing multiple seizures when the Administrator has probable cause to believe from facts found without hearing that a product is dangerous to health would appear to have complete justification. Historically speaking, such a summary procedure has never been anathema to due process of law, for confiscation is often the only way to promptly protect the public health.

"The proposed amendment seeks to limit the instances where multiple seizures or multiple libel proceedings may be instituted to the circumstances outlined above. Experience has shown that multiple seizures under the third and fourth instances outlined above find little justification for the exercise of such a drastic remedy. Multiple seizures of a product throughout the Nation based upon an ex parte determination by the Administrator of the Federal Security Agency has a particularly devastating effect on shippers and companies engaged in the food, drug and cosmetic field. In many instances, a thorough multiple seizure program by the Federal Government has been tantamount to destruction of the business prior to any possible judicial decision on the merits of the Federal Security Agency's claim. Where it is claimed that a product is dangerous to health the protection of the public would seem to outweigh any deprivation that a private shipper may suffer. On the other hand, where there is no question of danger to the public health, but it is merely alleged and claimed that the labeling of an article is fraudulent or misleading in a material respect, justice and common sense would seem to demand that the shipper or claimant should not be subjected to the possibility of being put out of business by a multiple seizure campaign long before the merits of the controversy are settled. It is with this end in view that the proposed amendment to section 304 (a) of the Food, Drug and Cosmetic Act seeks to strike those provisions which authorize multiple seizures when the Federal Security Administrator has probable

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HARRIS & EWING

THE HOARDING PROBLEM

THE outbreak of hostilities in Korea has caused much excitement in the market for raw materials for this industry. Not only have a large number of manufacturers of the products of this industry suddenly awakened to the fact that the world conditions are unsettled, but they have sought, almost overnight, to obtain supplies to last them for several years ahead. Manufacturers and importers of raw materials do not have much trouble ascertaining who is attempting to hoard against a possible period of general mobilization and full scale world war. All they have to do is study the past record of the purchases of any customer to determine whether the orders are being placed for current or future consumption.

No manufacturer of raw materials is desirous of loading up customers now to the extent that if supplies do not become scarce, these buyers will remain out of the market for a long time and the supplier's business will then be at a comparative standstill. Nor is any supplier desirous of selling out his production or stocks to anyone who wants to buy with the end result that those who are really in need at a later date will have to go without. For this reason, suppliers are, for the most part, holding their customers as closely to their past purchasing record as is possible. Exceptions to this rule are being made by some suppliers in the cases of buyers whose business is mainly dependent upon one product in which the raw materials sought are used. Suppliers generally are willing to concede that a manufacturer who would have to shut down if he could not obtain supplies for one outstanding product is entitled to much larger shipments to tide him over a possible time of stringency of supplies.

Manufacturers who attempt to buy quantities of supplies far and above their normal purchases for a possible market to be developed for a new item, are also being refused these increased quantities for the reason that the goods might be needed for firms with established products. Suppliers feel that this is no time for manufacturers to be allowed to build up markets for new products if the supplies needed for these products make necessary the curtailment of supplies for products already well established in the market. Naturally, suppliers are, to some extent, influenced by certain factors concerning the manufacturer seeking these additional supplies. If the manufacturer has been a steady customer over a long period of years; if he is a particularly large customer, the loss of whose business would be a serious blow to the supplier; if he is a manufacturer who has an outstanding reputation for putting over new products in a big way and also has a reputation for loyalty to suppliers who take care of him when things are tight;—these and other factors naturally influence a supplier in his decisions as to the extent he will go in meeting current requests of manufacturers for additional supplies at this time.

Oddly enough, in a great many instances, manufacturers seeking additional supplies against a possible future shortage, do not seem to have any logical thinking behind their purchases. Many are just buying anything and everything that they use whether or not there is any data upon which to base a prediction of a shortage in the case of increased mobilization of industry and manpower, or even in the event of a full scale global conflict. Others are trying to figure as carefully as they can what raw materials which they use are likely to be short by studying what areas of the world they come from and how these areas will be affected by the spread of war. Further serious thought is being expended in an effort to try and determine what the military is likely to demand for personnel, weapons, or anything else. This study of possible military needs extends not only to the raw materials and other supplies which manufacturers in this industry need, but also to the basic materials from which these supplies are made. However, it would appear that much of this later study is futile since lack of necessary facts known only to the military and top officials in Washington must make the conclusions arrived at largely guesswork. And even if all current information were available to a manufacturer, his conclusions would not be infallible since there is no one who can forecast definitely the progress of a war and the supplies which will be required. One has only to study the progress of World War II to know that there is no telling what will be required at any given time. Remember the flash creams, the mosquito repellents, and the astronomical requirements for benzyl benzoate, to mention just a few things?

Then there is always the possibility that the Government will curtail the use of certain materials by manufacturers no matter how much material they have carefully hoarded and laid away in warehouses. Remember during the last war that unlimited supplies of many materials were only allowed to be used for goods going to the Armed Forces, while use for civilian supplies was sharply curtailed? Remember also how the Government commandeered stocks of anything

it needed from manufacturers who bought them against future need? Sugar was an outstanding example of this. Manufacturers must remember that war is now total and that industry, as well as manpower, will be mobilized to an increasing extent as the exigencies of the conflict require. There can be no accurate forecast of the degree of mobilization which will be required for the conflict that appears to be impending, and therefore there can be no accurate prediction as to how far the Government will go in curtailing production of various types of goods for civilian consumption, or how far it will go in taking over hoarded supplies for military needs or for spreading out to put all members of an industry on a more even basis. Certainly, if things get real stringent, the powers in command are not going to look very favorably upon the hoarders, and orders to commandeer these supplies can be certainly anticipated.

Manufacturers who would attempt to protect themselves against future shortages in the event of a global conflict must face the definite fact that in the event of such a war, so much of the various areas would be cut off, and the war would doubtless be of such long duration that any attempts now to obtain adequate supplies to tide them over would be puny efforts. With Europe and the Far East and the Middle East certainly cut off from shipments of anything but some strategic raw materials, manufacturers are sooner or later going to find out that they must depend for existence on supplies of materials which can be obtained in this hemisphere. All the hoarding that they can possibly do will avail them little more than nothing if the conflict is intense enough and of a long enough duration —which now appears to be the outlook.

Large manufacturers are not in as favorable a position to accomplish hoarding as are many of the smaller manufacturers. This is for the reason that large manufacturers who are dependent for a large share of their business generally carry at least a two-year supply of imported raw materials essential to the production of these products. Naturally the enormity of their requirements makes the procurement of additional supplies, of sufficient volume to mean anything, an almost insurmountable problem. On the other hand, the smaller manufacturers are much more likely to be able to obtain their raw materials in volume sufficient to last them a comparatively long time. However, the smaller manufacturers are in no better position with regard to obtaining their supplies from their regular sources since such sources, if long established and reputable, will not let their stocks be depleted by some buyers if it means that other customers of long standing will suffer as a consequence. However, these manufacturers, if refused by their regular sources, will not hesitate to buy from any other source or to attempt to obtain the goods through brokers or, in fact, by any means possible.

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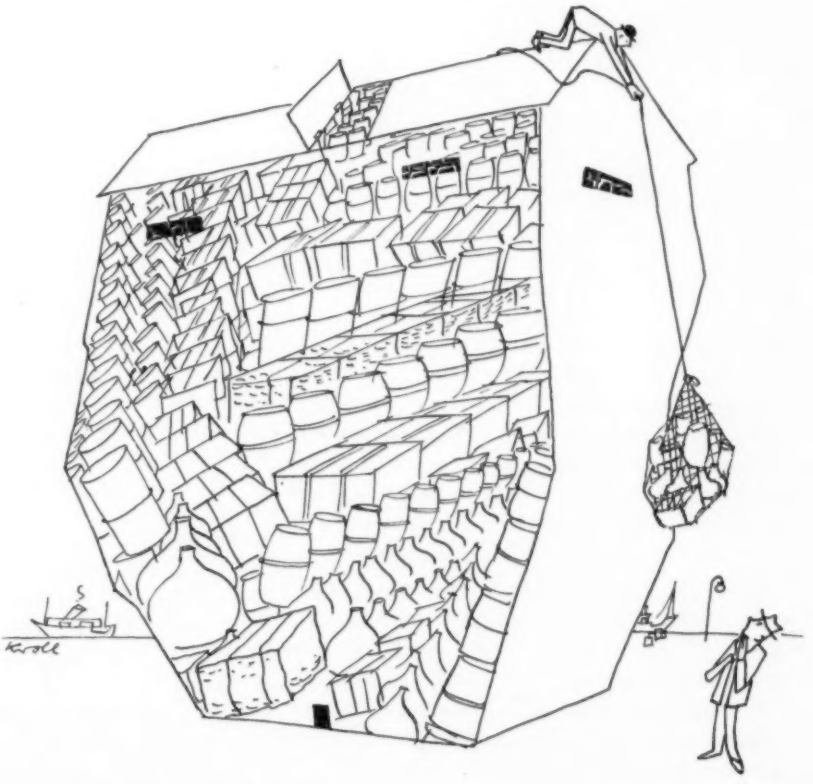

ODOR AND OLFACTION

II—OLFACTION'S PLACE AMONG BIOLOGICAL PROCESSES

THE proper fragrances, skillfully and judiciously employed, have such strategic potentialities for influencing human moods, thoughts and actions that a concerted effort to improve our understanding of these effects is urgently needed. Empirical use of odorants may, after much trial and error, achieve some of the desired results; but the broadening and deepening of our basic understanding of olfactory processes must precede the most effective fruition of the perfumer's art.

Many contributions have been made to our knowledge of odor production and of olfaction since the earliest theories of odor were propounded. We shall not attempt here to review nor to criticize existing theories, but shall examine olfaction as a biological process and shall consider how results obtained in studying other biological processes may assist us in studying and understanding olfaction.

Sensation—A Disturbance of Cell Function

Irritability is a universal characteristic of living matter, and a large number of substances, applied to the surfaces of a great variety of cells, produce reactions of the most diverse nature and degree. Smith[1] states that all physiological reactions are simply reactions against disturbance in an effort to restore protoplasmic comfort. The "new science" of cybernetics[2] correlates artificial and natural communication systems, and Raymond[3] considers that any stimulus applied to a cell, even a change in food supply, represents a transmission of information to the cell; also that transfer of information consists of creation of negative entropy in places where information is used to direct physical or chemical processes. Crocker & Sjöström[4] quote Eyring as connecting sensory cell stimulation with a change in the normal negative charge of the cell surface; protein molecules, normally placed with their negative ends outward, are thought to be disturbed by foreign molecules touching the cell, so that the charge can leak and produce an action current in the nerves. We are therefore justified in studying olfaction as a special case of biological reaction.

Enzymes and Biochemical Reactions

Increased knowledge of many biological processes has made possible their explanation in terms of biochemical reactions.[5] There is increasing evidence[6] that most or all of the soluble proteins act as enzymes. Enough enzymes have been isolated in pure, crystalline form to establish their identity with proteins; the "coenzymes" necessary for the functioning of some enzymes may at least in some cases be considered substrates or reactants, rather than true parts of the enzyme.

A distinguishing feature of macromolecules such as proteins is their ability to form addition compounds by means of minor attractive forces which are negligible in smaller molecules. While reactive centers such as $-OH$, $-SH$, $-COOH$, $-NH_2$ and $>C=O$ may be demonstrated to be important in some enzymes, the configuration and specific activity of many enzymes appear to depend upon such minor forces as hydrogen bonds and van der Waals forces. Such forces are nonspecific, but they are many times weaker than the forces operating in ordinary ionic and covalent chemical bonds; their strength diminishes very rapidly with distance; hence a molecule must be so shaped as to fit closely against the enzyme over a considerable area, so that many unit forces may combine to form a large total attraction, before an addition compound can be formed. No exact data are available on energy of enzyme-substrate bonds, but Wurmser[7] estimates the equilibrium constant of the complex agglutinogen-agglutinin group at 1×10^7. We may consider that a molecule so bound to an enzyme is "stretched" or "unfolded" so that points of its structure ordinarily unexposed are laid open to chemical reaction. We begin to understand why odor should depend more upon molecular shape than upon gross chemical function, if the molecules of the odorant exert their action by combining with proteins.

Cell Structure

A substance may produce an effect upon a cell, either by penetrating the cell or by altering permeability of the cell membrane for other substances. There is

*By P. G. Lauffer**

evidence that biological reactions are produced by both these methods. Danielli[8] pictures typical cell membranes as composed of lipoid molecules in two parallel layers with the lipophilic hydrocarbon chains facing each other, the polar groups forming a continuous layer on both sides; to these polar groups, long protein groups are attached by adsorption (probably hydrogen-bonding); such layers may be bounded by other special layers before either inner cytoplasm or outer circumambient fluid is reached. Complex organic molecules should be able to attach themselves to these layers, or to penetrate them. Compounds which can react by both polar and lipophilic groups my be expected to have the greatest effect. An illustration of biological action inside and outside the cell is given by Gale[9] and co-workers; gram-positive bacteria depend upon glutamic acid which diffuses into their cells from the medium, so they are affected by the surface-active tyrocidin which lessens the permeability of their membranes to glutamic acid; gram-negative bacteria synthesize their own glutamic acid, so are not affected by tyrocidin, but are inhibited by sulfa drugs which enter the cells and there interfere with the metabolism of glutamic acid.

Biological activity in general is due to the ability of the active compound to become attached to protein, and so to promote or inhibit some reaction vital to the cell. In the case of the sulfa drugs, the acidic nature of the $-SO_2NH_2$ group must come into play, forming a salt much as acid dyes form salts with wool. Pyridoxal is believed to perform as a coenzyme in decarboxylation by forming a Schiff base with amino acids. Aubel[10] has shown that glucose, by making bacterial membranes impermeable to fluoride, can prevent the characteristic effects of fluoride upon the cells. In the case of an odorant, the reaction must be such as to create a nerve impulse.

Odorants and Enzymes

Alexander[11] postulated that odorants may affect the catalyst balance of the olfactory cells by any of three methods: (1) by modifying existing catalysts; (2) by forming new catalysts; (3) by inhibiting the activity of normal catalysts. Any change so effected would produce a highly specific change in chemical turnover of the olfactory cells, and could cause specific electron liberations which would result in nerve impulses. Compared with some biological processes, olfaction so conceived comprises a rather simple and direct series of events, for the odorant acts directly upon the same cell which sends nerve impulses along its own extensions (axons) into the brain. Sexton[12] has stressed the complex series of stages through which applied chemicals must pass in order to exhibit certain

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* Chief Chemist, The George W. Luft Company.

DRUGS IN THE

THOSE in the drug and pharmaceutical manufacturing industry, as well as those in the wholesale and retail drug business who have any idea that the threat of the Truman-Ewing Plan for compulsory health insurance is something that does not concern them, should take a peek at the report of the British Joint Committee on prescribing, set up by the Central and Scottish Health Services Councils, with Sir Henry Cohen as chairman.

While this is the "second interim report" of this committee—generally referred to as the "Cohen Committee"—the first interim report was not published, and therefore this report is the first information available to the public. The Committee, which consists of four pharmacists and sixteen medical practitioners, after four meetings decided to present a second report of their recommendations and progress. The present position of the Committee is that, if it appears to the Minister after an investigation of the orders for drugs and appliances given by a practitioner that there is a *prima facie* case for considering that by reason of the character or quantity of the drugs or appliances the cost is in excess of what was reasonably necessary for proper treatment, the Minister may refer the matter to the Local Medical Committee for its consideration, and the practitioner is then required to explain his action. Regulation 12 provides that if this is unsatisfactory he may have a sum withheld from his remuneration by the Executive Council. The report continues:

"*From the outset we were agreed that wherever our discussions might lead us there should be no absolute restriction on the prescribing by a general practitioner of any drug which in his opinion was necessary for the treatment of his patients.* This meant that if we were to recommend that certain drugs should not be prescribed by a practitioner, he would still be at liberty to prescribe them; or if a list of 'approved' drugs were drawn up the practitioner could still prescribe drugs not on this list. In either case, however, he might have to justify his action before his colleagues on the Local Medical Committee. This freedom of prescription was a fundamental assumption throughout our discussions.

"The Departments provided us with a list of several hundred proprietary preparations which were amongst those being prescribed on Form E.C.10. The majority of these preparations consisted of drugs singly or in combination which did not differ materially from the drugs and preparations included in the British Pharmacopoeia, the British Pharmaceutical Codex or the National Formulary. Such proprietary preparations are usually more expensive—often very much more expensive—than standard drugs or preparations of reputed analogous therapeutic effect. There is no medical advantage in prescribing an expensive proprietary brand of a standard drug or preparation, but equally no objection to such prescriptions can be taken on purely medical grounds.

"We were not unanimous in our views on the desirability of drawing up at this stage lists of proprietary preparations and other drugs which a doctor could or could not prescribe without risk of his having to justify his action. A minority thought that a list of any sort would re resented by general practitioners and that the existence of any form of restriction would create a bad effect on the public in fostering a belief that some drugs, however essential they might be for the treatment of a patient, could not be obtained in the National Health Service. The majority, however, thought that the issue of a list would be welcomed by practitioners, for they then would know what they could prescribe in reasonable quantity without risk of having to justify their action, and they would be in a stronger position to resist the requests of unreasonable patients.

"We were, however, agreed that the co-operation of doctors should be sought before any attempt was made to impose positive restrictions. We therefore recommended to the Health Services Councils in a first interim report dated December, 1949, that a letter should be sent to all practitioners stating that the Committee was reluctant to recommend any restrictions on the drugs which could be prescribed in the Health Service, but was disturbed at the high cost of the pharmaceutical

BRITISH PLAN

WIDE WORLD

services, particularly where caused by the prescription of expensive brands of proprietary drugs, and asking for the co-operation of the profession to prevent excessive prescribing. We also recommended that because a patient was often supplied with a proprietary brand of drug at hospital and then was recommended to continue with the same brand, the letter should be sent to hospital staffs as well as to general practitioners. A letter was accordingly drafted by the Departments and its terms in general approved by us.

"Although we decided that no attempt should be made to impose positive restrictions until the effect of the letter to doctors had been determined—even though this might mean a delay of some months—we also decided (by a majority) that the preparation of a list of drugs should start at once. There are two ways in which lists of preparations could be compiled to inform practitioners of the preparations which they could or could not prescribe without risk of having to justify their action. First, a list could be drawn up of drugs of doubtful value or unnecessarily expensive brands of standard drugs. The difficulties of compiling such a list were, however, clearly formidable. It would be necessary to compile an exhaustive list so that no unnecessarily expensive brand of a standard drug should by its omission be regarded as 'approved'; it would be necessary to add to the list at very frequent intervals as new drugs or new preparations came on to the market. The second and more practicable method would be to compile a list of 'approved' drugs which a practitioner would know he could prescribe, in reasonable quantity, without question.

"We were in doubt about the meaning of drugs of 'unethical character' referred to in our terms of reference. We understand that in the pharmaceutical industry this phrase is applied to preparations which are advertised direct to the public as a means of increasing their sale. While there are many preparations which fall within this definition, some of them are advertised also in the medical Press and not all of them are essentially different in character from preparations which are advertised exclusively to the medical profession in journals or by other means. We have not, therefore, attempted to allocate preparations into the categories suggested in our terms of reference, but have adopted a more suitable classification. *Since, however, the responsibility for prescribing should rest solely with the practitioner, the Committee (with one dissentient) regards it as undesirable that medicinal preparations advertised direct to the public should be prescribable on Form E.C.10.*

"*We agreed that all drugs and preparations described in the British Pharmacopoeia, the British Pharmaceutical Codex and the National Formulary should be freely prescribable (except those classified as foods, toilet preparations, or not drugs for N.H.S. purposes, by the Definition of Drugs Joint Sub-Committee).* These drugs and preparations are referred to as 'standard' or 'official.'

"At our request the Departments provided us with samples and full details of some 50 proprietary preparations. A study of these suggested that proprietary preparations could for our purposes be conveniently arranged under the following six categories:—

(1) New drugs of proved value not yet standard.

(2) Proprietary brands of standard drugs, singly or in combination.

(3) Standard preparations, and new remedies of proved value, in elegant form or vehicle.

(4) Qualitative and/or quantitative modifications in the composition or combination of standard preparations, or new remedies of proved value, which are not accepted as therapeutically superior to preparations included either alone or in combination in the British Pharmacopoeia, the British Pharmaceutical Codex or the National Formulary.

(5) Preparations not in the British Pharmacopoeia, British Pharmaceutical Codex or National Formulary, which in the Committee's view have not been proved of therapeutic value.

(6) Preparations which are a combination of (4) and (5).

"Apart from preparations in categories (5) and (6) of the previous paragraph (which consist of, or contain,

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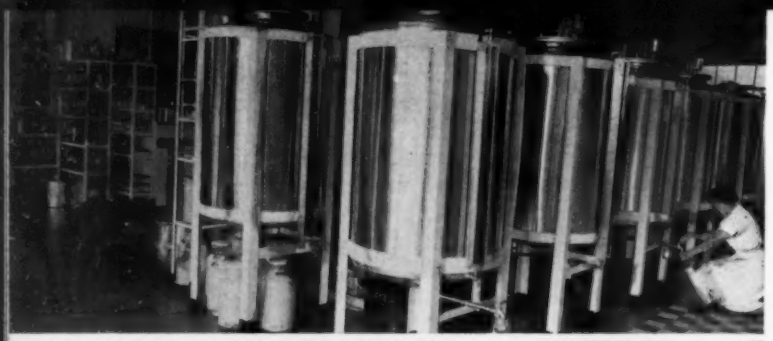
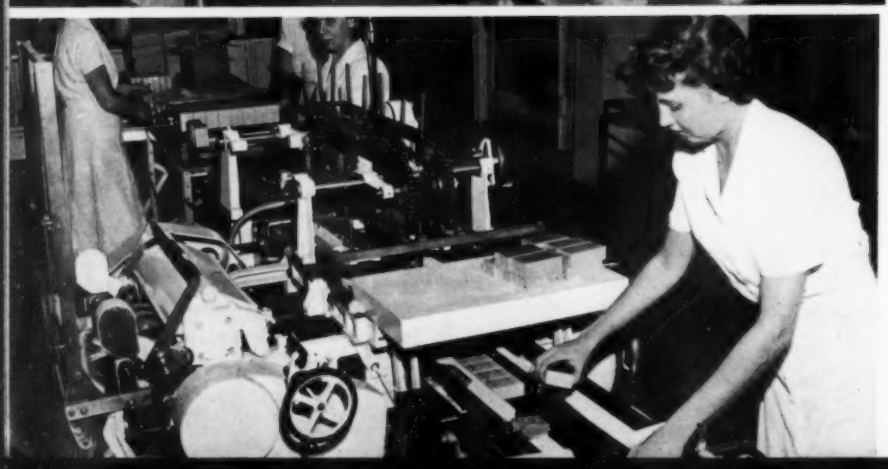




PHOTOS BY HARRIS EWING

THE EVYAN PICTURE

A DAINTY dynamo crowned with a blaze of Titian hair and projecting the crisp and brittle lustre of a Dresden figurine has white-shouldered her way during the past ten years to the top of the fragrance industry. This petite and versatile whirlwind who is Evyan is the creative and promotional force behind the line of perfumes that commands a prominent place among today's most popular scents. That is only one side of the story . . . the feminine half. The masculine and practical influence is Dr. Walter Langer, her marital and industrial partner, who develops the fragrance themes that are conceived in the imaginative and artistic mind of Evyan. Both perfectionists work with precise coordination . . . Evyan propounding ideas with enchanting disregard for details of production, and Dr. Langer materializing them for an ever-increasing demand. A flair for injecting their multifaceted personalities into their creations characterizes the operations of this extraordinary couple, and to a vast extent is responsible for their success. The rest represents industrious persistency, driving energy and a solid sincerity of purpose.

The Evyan plant, overlooking New York's East River, operates with cool and smooth efficiency under the personal direction of Dr. Langer, who supervises every phase of production. Employer and employee relations are remarkable for their compatability, and there is virtually no turnover of staff. Of the highest calibre, the staff itself is selected from groups of all ages in each department. There is nothing overlooked that is conducive to happy working

(*Continued on page 428*)

BETTMANN ARCHIVE

By Milton A. Lesser

MOTION SICKNESS

DESPITE all that has been written about motion sickness in the past, it is now realized that very little really dependable information was available before World War II. Even though the term, "motion sickness" was coined[1] back in 1881, it is only recently that it has been used generally to include a variety of conditions which are closely related with respect to cause, symptoms, prevention and treatment. Among the various conditions which can be grouped together in this way are seasickness, car sickness, airsickness, trainsickness and elevator sickness. The malaise caused by swings and various other amusement devices may also be included as a form of motion sickness.

As was pointed out by Tyler and Bard[2] in their very comprehensive review, the importance of securing accurate data on motion sickness became of major importance with the outbreak of war. It was realized early that the moving of large numbers of men by land, sea and air might be attended by high rates of motion sickness. As a result of the extensive studies carried out by teams in Canada, England and the United States much has been learned about this condition and considerable misinformation has been relegated to the limbo. Studies on motion sickness, especially investigations on various preventive or curative drugs, are still going on.

For one thing—and this may surprise many people—

it seems that almost every normal person can be made sick by motion. This, of course, is in marked contrast to the old view that only a small and special part of the population is susceptible to motion sickness.[2] Schwab,[3] for example, has found that about 40 per cent of any group are susceptible to this affliction on sudden exposure to rough weather at sea. Others,[4] however, cite much higher figures, as much as 80 to 90 per cent under severe conditions.

Airsickness was, of course, an important problem during the war and it is currently a major consideration for commercial airlines. From evidence gathered during a year's study at a naval air station, Yanquell[5] concluded that airsickness is the rule rather than the exception among student aviators and passengers who travel infrequently. From another study,[6] it appears that more than one-quarter of the passengers may be expected to become airsick in flights exceeding two and one-half hours, even under normally-expected variations of flying conditions.

Susceptibility to motion sickness varies with the individual and with circumstances. According to reports in the literature[2,7] infants and elderly persons are seldom afflicted with motion sickness. Car sickness is more common in children than in adults, while the reverse is true with respect to seasickness and airsickness.[8] Many deaf-mutes and people with internal ear damage are immune to motion disorders.

On long voyages, seasickness seldom lasts more than a few days unless rough weather persists. Many people who succumb on their first air or sea voyage will gradually develop a sort of immunity to motion sickness with repeated trips. However, if long periods intervene between exposures, the resistance to motion sickness is lost.[9]

It is estimated, say Tyler and Bard,[2] that about 95 per cent of all susceptible persons are able to adapt themselves to motion. This, of course, points up the fact that there are some people, amounting up to about 5 per cent of the population, who are so susceptible as to be unable to adapt or acclimatize themselves to motion. It is also noted that adaptation to one type of motion does not mean that the individual can adapt himself to motion produced by a different vessel, airplane or experimental device.

In discussing methods for determining susceptibility, these authorities point out that considerable time, effort and expense could be saved if it were possible to predict individual susceptibility to motion. During the War, several types of tests were developed and studied. While the tests provided some data, they do not seem capable of indicating the ability of the most susceptible individuals to adapt themselves to motion.

Like susceptibility, the symptoms of motion sickness vary in intensity from person to person. The cardinal symptom is nausea which comes in waves and terminates in violent vomiting. Warning signs, include yawning, increased salivation, a greenish pallor, profuse cold sweating, drowsiness, inattention, depression and occasionally, hiccuping. Cold sweating is considered[2] to be the most reliable indication of the onset of motion sickness. Facial pallor is a striking and universally recognized characteristic of the disorder and its onset is a useful sign of approaching sickness. Green,[10] however, noted that sweating and pallor are often absent in airsickness but that various head sensations are mentioned, including aching, dizziness, pressure and tightness. While prolonged motion sickness is not fatal, it may produce an alarming condition marked by arterial hypotension, profound weight loss, dehydration, starvation with acidosis, and depression.[11]

Even though motion sickness is an age-old condition, its exact causal mechanism is not yet fully understood. Generally speaking, it appears that physical, physiological and perhaps psychological factors enter the picture. Though some people tend to forget its importance, one cannot overlook the fact that motion is the primary factor in motion sickness. As pointed out in our standard reference text,[11] the common denominator in motion sickness is exposure to acceleration. This may be purely angular as in a Barany chair, linear as in an elevator, or radical as in a swing. More commonly, however, it is encountered as a mixture of various forms of acceleration, as in a ship which rolls, pitches, tosses and yaws.

Physiologically, the vestibular apparatus of the inner ear is considered to be the site involved in the response to motion. When the balancing mechanism encounters unusual stimuli and space changes, its inadequacy is expressed as a disturbed function, or more specifically, as motion sickness. That irritation of the vestibular apparatus leads to the characteristic symptoms of the disorder is corroborated by the fact that many deaf-mutes and others with internal ear damage are immune.

Other, secondary factors may play a role in the physiology of motion sickness, but many of the older concepts must be modified in the light of newer knowledge. Vision, for example, has long been considered to be a factor in the onset of motion sickness. While it is conceded[2] that visual stimuli may facilitate the production of the sickness, it has been found that visual influences are more apt to ameliorate the effect of motion. Experimental[12] studies have shown that susceptibility to swing sickness is greater when vision is shut off, either by blindfolding or by enclosing the test apparatus.

These experiments also affirmed the fact that body position, particularly the position of the head, is of

(*Continued on page 404*)

SHAVING AIDS

By Harry Hilfer

SINCE most men shave almost every day of the week, a market has arisen which consists of preparations designed to ease the process and to make it more pleasant. Shaving problems vary from individual to individual, the difference lying chiefly in the hair structure and in the density of the beard. Men through their own experiences have become partial to the different types of razors used, though the conventional straight edged razor is still the most popular as compared to the newer electric razors. Choice of shaving creams, which are used in conjunction with the straight edge, is divided between brushless and lathering creams. However, these preparatory treatments prior to the actual shave are all designed to wet the beard thoroughly, so that the razor edge may more easily reach the hair shaft without any interference from adhering films.

This basic principle also applies to the electric razor with one important exception, that the beard be relatively dry before shaving is begun. Performance, however, is better if the adhering film is first removed.

A preshave treatment in any case, therefore, should consist of a process which may be described as a cleansing process where the oil and soil are first removed from the beard. When the straight edged razor is used, the beard should be kept moist and therefore the creams should serve this function, while an electric razor is used, a fast drying detergent solution in an alcohol-water vehicle may be employed to advantage.

The literature contains a great deal of data relative to shaving creams. Of particular interest is the inclusion of synthetic wetting agents further to enhance their properties as beard moisteners. Much the same process may be followed with preshave preparations for men using the electric razors with the drying qualifications previously mentioned. The author therefore does not feel that a further discussion of these products would be of any particular value. There are, however, a large number of preparations in fairly common use after shaving has been completed, which are becoming increasingly more important to the consumer.

The after shave lotion is perhaps the best known of these preparations. It performs a variety of functions, but its most important one seems to be to cause the face to feel free from chafing or other irritations that may be due to shaving. These preparations therefore are formulated with a relatively high percentage of menthol which supplies a cooling effect after application and acts as a mild analgesic. A relatively high alcoholic concentration is also included in this type of formulation primarily to hold the essential oils in solution, but also to act as a stimulant to the facial tissues and to hasten the drying of the film applied. Also included in after shave preparations are small percentages of a humectant, glycerine being the most popular, whose purpose is to leave a minute film on the face so that it does not feel excessively dry.

More recently, bactericidal agents have been added to lessen the danger of infection because of accidental cuts. It is true that the high concentration of alcohol in the formulation will itself act as a bactericide, but there is no protection after it has evaporated off. The

bactericidal agents may be chosen from a large list which includes quaternary ammonium compounds and chlorinated phenols with due care being taken to investigate possibilities of irritation of the individual agencies being tested. In connection with methods of evaluation of these compounds, the methods of use should be borne in mind. Agencies which may produce no irritation on short contact may conceivably produce rather severe ones after a 24 hour contact period. In the choice of any agency for use in an after shave lotion, a maximum contact period of 24 hours should be assumed. The alcoholic concentration of after shave preparations is an important consideration in its formulation.

Too high a concentration, though useful from an astringency standpoint, may cause the face to feel too highly irritated, while too low a concentration would cause too high a ratio of essential oils to precipitate. In most such preparations on the market the alcohol ratio runs anywhere between 50-65 per cent, with a preference towards the lower figure. Choice of essential oils to be used in the product may easily influence the proper alcoholic concentration, since the solubilities of the oils in alcohol water vehicles vary a great deal. A further addition of hydrophilic dispensing agents to the solution may further enhance the solubility of the oils as would the amount of humectant added. The method of manufacture also should take cognizance of the influence of temperature on the solubilities of the oils. The classic method of subjecting the solution to a low temperature treatment over a long enough period to precipitate all the materials that later may cause the solution to cloud whenever subjected to low atmospheric temperatures, and then filtering, is perhaps the best method of circumventing such a problem. The appearance of the preparation is of great importance from a purely psychological viewpoint. Any tendency towards haziness or cloudiness immediately suggests spoilage to most users.

After-shave talcs have a somewhat different function than do the lotions and they are used in conjunction with them rather than as substitutes. Their immediate purpose is to form a smooth-feeling film over the face and thus cover any rough spots caused by thickly bearded areas on the face. Many men have unusually sensitive skins which are easily irritated by shaving causing red splotches to appear. The after shave talc must also act as a mask for these surfaces. In order to combine these functions and couple it with a measure of adherency, talc is used as the basic ingredient in the formulation. The masking agency may consist of either titanium oxide or zinc oxide with a somewhat greater preference for the latter because it is endowed with some small astringent properties. Metallic stearates usually are included as well to make the film smoother to the touch and also more adherent to the skin. Many of the after-shave talcs are tinted a flesh colored shade so that the masking effect does not appear ghastly or suggestive of a sickly pallor.

Men do not desire to appear unnatural so the masking qualifications should not be incorporated to such an extent that it becomes too obvious, nor should the powders be so finely ground that too dense a film will result. Fine grinding through a hammer mill is important for proper particle size and proper dispersion of the included raw materials with each other. However, it may be too finely ground as well causing too dense a film since a greater surface is presented for light reflection.

The essential oils used may be incorporated during the mixing process and further homogeneous dispersion is easily accomplished by the hammer mill. The quantity of oils used should be enough so that their odor is barely perceptible after application. Too great an addition would cause most men to stop using it.

Many of the talcs now on the market have bactericidal agencies included as well as do the after shave lotions. Much the same methods must be used in making a proper choice. In this connection it should be remembered that any bacteriostat must be soluble in water to be effective. Solution here is effected by the film of perspiration which issues from the pores during the day. The bacteriostatic agency included in the talc must be capable of being dissolved by this film in order to exert its functional activity. Addition of ingredients in the vehicle which would cause its precipitation therefore should be barred, and since the powders themselves are neutral in their pH the bacteriostat itself must be capable of solution at a neutral pH.

(Continued on page 426)

PHARMACEUTICAL SAMPLING†

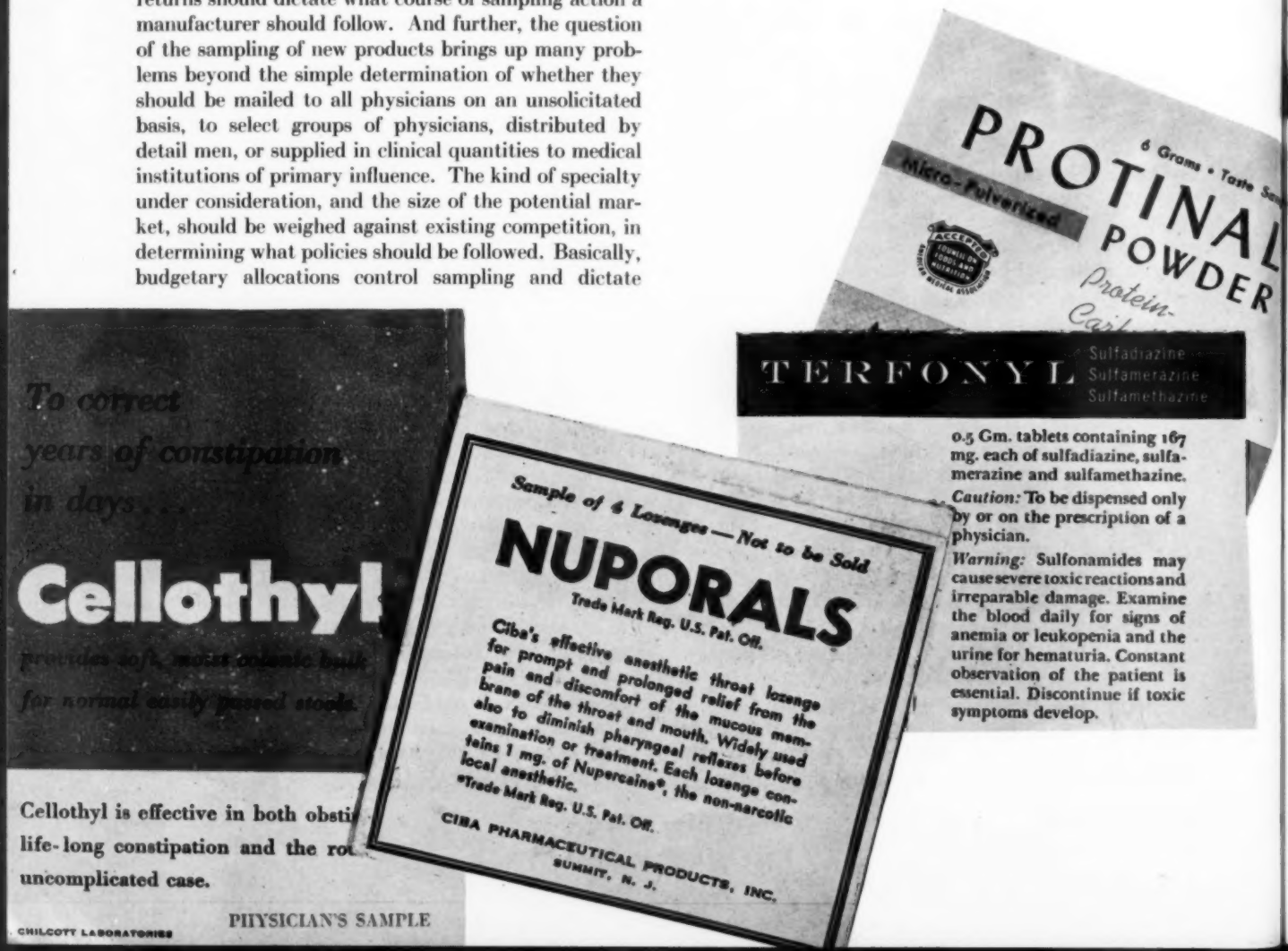
WE, IN the pharmaceutical field, who are blessed with high mark-ups, justified by our expensive research activities, do not feel the impact of an incorrect or carelessly thought out promotional plan, as do such businesses as the food or soap industries, which operate on low profit margins. With the latter, an incorrect sampling and advertising campaign is reflected in staggering losses. In the case of the pharmaceutical manufacturer, the average result of such a campaign is a reduction in profit returns. In most instances no red figures "danger-light" the promotional procedure which was instituted with the resulting assumption that the campaign was a successful and a proper one. It is more than probable that the contribution of a survey from Marketing to the preliminary planning, would have assured a larger profit return to the organization.

It is axiomatic that market potentials and profit returns should dictate what course of sampling action a manufacturer should follow. And further, the question of the sampling of new products brings up many problems beyond the simple determination of whether they should be mailed to all physicians on an unsolicitated basis, to select groups of physicians, distributed by detail men, or supplied in clinical quantities to medical institutions of primary influence. The kind of specialty under consideration, and the size of the potential market, should be weighed against existing competition, in determining what policies should be followed. Basically, budgetary allocations control sampling and dictate whether sampling spreads should be national in scope or confined sectionally.

One might almost segregate new products by two types:—

1. The specialist type—those used by only a certain segment of the medical profession.
2. The general type—those which include products such as vasoconstrictors, antacids, antispasmodics, etc.

In category No. 1—the specialist type—let us take as a hypothetical example a spinal anesthetic; Heavy Nupercaine, if you will. With such a product, at the time of its introduction, heavy sampling, even if confined to anesthesiologists, surgeons and obstetricians, would definitely not be the sampling procedure of choice. Here we have a meritorious anesthetic, the future use and sale of which might be adversely affected if the product were placed in unskilled hands, with a


PROTINAL
Micro-Pulverized
POWDER
TERFONYL
Sulfadiazine
Sulfamerazine
Sulfamethazine
0.5 Gm. tablets containing 167 mg. each of sulfadiazine, sulfamerazine and sulfamethazine.
Caution: To be dispensed only by or on the prescription of a physician.
Warning: Sulfonamides may cause severe toxic reactions and irreparable damage. Examine the blood daily for signs of anemia or leukopenia and the urine for hematuria. Constant observation of the patient is essential. Discontinue if toxic symptoms develop.
To correct years of constipation in days . . .
Cellothyl
Cellothyl is effective in both obsti
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uncomplicated case.
PHYSICIAN'S SAMPLE
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NUPORALS
Trade Mark Reg. U.S. Pat. Off.
Ciba's effective anesthetic throat lozenge for prompt and prolonged relief from the pain and discomfort of the mucous membrane of the throat and mouth. Widely used also to diminish pharyngeal reflexes before examination or treatment. Each lozenge contains 1 mg. of Nupercaine®, the non-narcotic local anesthetic.
®Trade Mark Reg. U.S. Pat. Off.
CIBA PHARMACEUTICAL PRODUCTS, INC.
SUMMIT, N. J.

*By Vincent A. Burgher**

fatality resulting due entirely to lack of knowledge of the proper technique necessary for its ue.

With the introduction of such a product, contacts are made by the medical director and his associates with the proper medical personnel of leading institutions. The advantages and the disadvantages of the anesthetic and the proper technique to be employed for its administration are discussed and are thoroughly understood. Samples are supplied in desired amounts to the investigators for use in the institutions. Based on the investigations carried out publications are forthcoming with resulting requests from other members of the medical profession for a sample or samples of the anesthetic.

Such requests must be carefully screened, not from a monetary standpoint, but to prevent the product from falling into unskilled hands and thereby prevent misuse of the drug. Resulting sales can even be restricted to recognized institutions if indicated.

Although the detailing staff is thoroughly informed relative to the product and the technique employed for its administration, samples are not placed in the hands of the representative staff but are handled 100 per cent through the medical division.

Here you have an example where restricted sampling is far, far more effective and more productive of ultimate use and sale of the product, than promiscuous nationwide or sectional sampling.

In category No. 2, the general type, the problem of sampling resolves itself into one of two sales situations.

In the first instance, the product may be an item sold *only* on the prescription of the physician.

With the second, it may be a specialty so labeled that purchase for self medication can be made over-the-counter, as well as through the medium of a physician's prescription.

With the general type of product, its introduction, preceded obviously by national trade distribution, should include unrequested sampling to all top-flight general practitioners and to those specialist groups which could utilize the new medication. Representatives

(Continued on page 421)

*Vice President in Charge of Sales, Ciba Pharmaceutical Products, Inc., Summit, New Jersey

†Presented at the Eastern Section of the American Pharmaceutical Manufacturer's Association.

For a touch of packaging excellence
many prominent manufacturers specify
Carr-Lowrey opal jars.
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PACKAGING AND SELLING

PRIVATE BRANDS

The private label brand of the retail store, at least in this industry, reached its peak just before 1940. At this time, following the long years of the depression, a high percentage of the powerful retail interests had established a private label brand covering one or more products.

This kind of private label seemed to have a number of useful advantages. The retailer could set almost any price he pleased for any motive that happened to enter his mind. He could feel sure of at least limited sales with a margin of customers where he had established an intimate friendship and goodwill and no competitor could horn in on the resale wherever he was successful in establishing usage and repeat business.

For most retailers, however, private lable turned out to be an illusion. The brand name was unknown to customers and few retailers had time or skill to build up a brand recognition the way the successful manufacturer does. In selling these products, in addition to a great deal of extra time consuming effort by the clerk, and the use of valuable display space that was returning doubtful profits and causing many lost opportunities with impulse-purchase products, the retailer was finding in many cases an indifference and even resentment among his clerks over the pressure to sell products which they secretly considered inferior to many of the best brands. The private label had an unfortunate way of tying up capital in products that were slow movers.

As the period of the war approached and shortages began to arise, the retailer found that he would have to purchase containers and materials in larger quantities than he deemed wise in order to get anything at all. He also found that he was at a very great disadvantage in competing with manufacturers for such supplies as packaging materials, etc. Finally in products such as cosmetics the retailer found that he was at a serious disadvantage with the manufacturer in product development, in package changes and in all of the different developments which manufacturers continually employed to give life to their product, its display and its promotion.

In other words, in order to do a proper job on private label the retailer found that he had to take quite a bit of time from his highly competitive retail business, even to make his private label manufacturing venture an also-ran that could stay in the race.

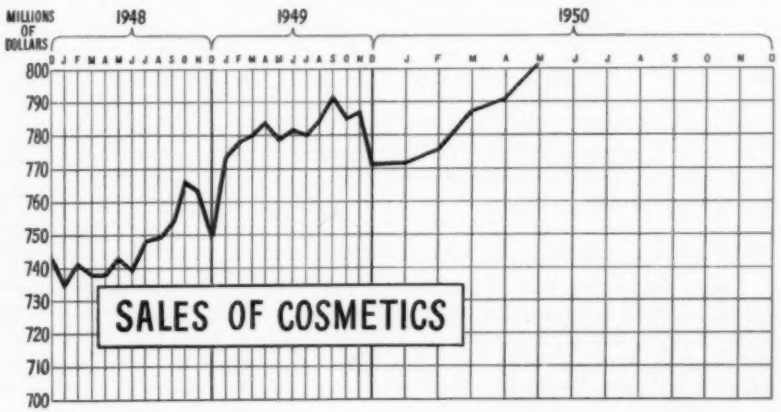
A few of the very large chains have solved these problems because their enormous sales volume in many products enable them to sustain a packaging or manufacturing operation that in turn would be a huge volume enterprise. These private label projects have largely been confined to volume staples such as bread, coffee, frozen fruit juice, etc.

In the department store, independent drug store and to a lesser extent the drug chain the private label has largely been losing its lure. This has been particularly true in the department store where historically this type of retail operation has taken great pride in controlling its own traffic and in diverting it into purchases of goods which the store selected for its customers. It was largely the department store operation which gave rise to the phrase, "The retailer is the purchasing agent for the public."

Gimbel Bros. of New York has been in the forefront of this old line retail thinking of putting primary stress on the promotion of unbranded merchandise or that type of merchandise where they could largely control marketing within their area. But in the last few years Gimbel Bros. has been undergoing a rather complete renovation, both physically and mentally.

Gimbel Bros. New York store has been undergoing a complete remodelling and redecoration program which is now on its way to completion. Now Gimbel's is entering into quite a com-

Retail sales of cosmetics for the twelve months ended with May 1950 totalled $801,611,000. This compares with $791,628,000 for the twelve months ended with April 1950, and with $778,450,000 for the twelve months ended with May 1949.



plete remodelling of its marketing policy, and in the future primary stress will be placed on national brands where quick turn-over, minimum inventory and consumer acceptance is the symbol of approval. This does not mean that Gimbel will discontinue any private label which it controls or any unbranded or offbranded merchandise where a worthwhile clientele has been built up. It simply means that the Gimbel of yesterday, a store depending primarily on promotions and very definitely upon the bargain hunter type of customer who depended upon Gimbel to ferret out for him something that looked like a good buy even though he never heard of the manufacturer before, will in the future be looking more and more for that customer who wants quick service and the kind of commodity he has already made up his mind he is willing to buy.

Whether this means that the new policy is a transitional step to a further development into a major extension in self service remains to be seen. The way things look just now in the retail world seems to indicate that the retail sales of the well-accepted national brand in low and medium priced utilities is inevitably headed for self-service retailing.

Obsolete Robinson-Patman

Laws become obsolete just as do ideas, machinery and products. It appears now that the Robinson-Patman Act is on its way to becoming obsolete. This law has been called unworkable by many able jurists, business men and even a few bureaucrats. It was a result of pressure from the wholesale trade to protect the small independent retailer and has a basic philosophy in line with the American mood. At that time this objective seemed noble and practical.

Actually the interpretation given to this law by the Bureau entrusted with its enforcement has carried it far beyond the dreams of any Congressional thinking. This is why a prominent jurist at one of the law colleges recently termed the act a legal abortion.

It looks as if the Robinson-Patman Act is on its way to becoming obsolete as well as non-enforceable because the reasons why it is expected to help the little fellow stay in business are no longer the real problems of the little fellow in trying to hang on to his independent business life.

Mass purchasing power and the tricks and connivance that can be employed where such purchasing power exists are not any more the number one reason for survival in the retail business. Gimbel's new policy in switching predominantly to the merchandising of national brands and the development of such things as self-service and automatic machine selling in the retail store is proof of that.

Retailers today are succeeding on the basis of meeting greatly expanded overhead cost, including that of rent, labor and efficient handling and flow of goods. The retailer today who controls large traffic in his store and large volume of retail sales has an advantage in reducing the unit costs of these operating factors in a way that gives him a much greater competitive weapon than anything he ever derived from finagling with the advantages of mass purchasing.

New Bayer Package

The Bayer Company, division of Sterling Drug, Inc., has adopted a new system of unit packaging for Bayer Aspirin.

Shelf container cardboard packages have been eliminated and instead six bottles of 24's, six bottles of 100's and two dozen tins of 12's are each cellophaned wrapped as separate units.

According to Mr. R. L. Steenrod, vice president of Bayer, drug wholesalers and retailers have universally approved these cellophane unit packages. These packs are more easily handled by wholesalers, are moisture proof, easy to handle and provide good display.

The Illness Market

Almost eighty per cent of an estimated 130 million illnesses during 1950 will be attended by a physician, says Modern Medicine, and about one-fifth of those attended will be cared for in a hospital, the remainder being seen in the physician's office, the patient's home, or elsewhere. In this estimate an illness is any symptom, disorder, affection or injury persisting one or more days for which medical services are received or medicines purchased. Illnesses with the lowest rate of attendance by physicians are minor respiratory, digestive and some communicable diseases. The low rate of attendance for communicable diseases is due to the fairly high incidence of mumps, measles, chickenpox, and German measles, which together account for nearly three-quarters of all communicable diseases. Mumps are attended by physicians in 45 per cent of the cases; German measles in 46 per cent; chickenpox in 50 per cent; and measles in 65 per cent. Of the ten million illnesses requiring surgery, 80 per cent will be treated in a hospital, this representing about one-half of all the hospitalized illnesses. The other 20 per cent of surgically treated illnesses will be attended outside the hospital.

Super Grocery-Drug Stores

It has long been suspected by many people that the grocery super-market in its ultimate development would move into the ranks of a self-service cash-and-carry department store, stocking practically every kind of packaged, branded utility that customers could lug away.

Up until now this development of the grocery super-market has been largely on its own momentum.

Leading aggressive stores in various parts of the country have been moving into drugs and toiletries, candies and many other kinds of accessories and consumer wants, such as hosiery, underwear, etc. It is reported that five per cent of the super-markets now fill prescriptions.

The new development which seems to be on its way is the merging of retail interests with the super-market on some kind of combined plan. This is either because the enormous purchasing power or traffic of the super-market makes such a move desirable, or because from a competitive viewpoint in certain localities this type of store is becoming almost irresistible. For instance, in California dairies have been buying into super-markets because of the inroads these stores are making in milk sales.

But the most interesting development of this sort, and probably one of the most decisive in affecting retail changes is the new move of Rexall's west coast chain, the Owl Drug Co., of going into

Like father, like son! "Junior" bottles look just like the bigger ones, help customers to recognize your brand in every size.

"Junior looks like Papa!"

and because "he" does,

customers pleased by samples can quickly identify and buy your standard sizes

Often, products are offered in sample packages that have no resemblance to the standard-size bottles that pleased customers are expected to buy.

Prepare to capitalize on the extra sales appeal of package similarity when you sample. Tiny sample or trial-size Duraglas bottles are available in the same style as the larger standard-size bottles that will carry your product to market.

This extra promotion advantage is yours at low cost through the use of stock-mold Duraglas containers. Choose from our full range of sizes in many different styles.

Let us show you how economical and efficient Duraglas containers can be for your operation. Our fully staffed office in your city will gladly give you full details without obligation. Call now.

Duraglas Containers are Protectors of Quality

TRADE MARK REG. U.S. PAT. OFF.

OWENS-ILLINOIS GLASS COMPANY • TOLEDO 1, OHIO • BRANCHES IN PRINCIPAL CITIES

THE BOTTLE THAT'S GOING PLACES

NEL, AN ANTISEPTIC POWDER, by Beck Products, Detroit 19, Mich., is sprayed on with just a squeeze of the Plaxpak bottle. Users will like the way they can apply the antiseptic accurately and gently on cuts, poison ivy and other skin irritations.

CAPITALIZING ON THE DISTINCTIVENESS of stock shapes, L'Orle is packaging several of its famous toiletries in flask-shaped Plaxpak bottles. Lightness and unbreakability of this container make it extra-convenient to take on trips. No leaking or spilling.

ANTS IN YOUR PLANTS? Spray-Away kills 'em quick. Just squeeze the unbreakable Plaxpak bottle and out comes a mist of sure death for bugs. Self-atomizing bottle is always handy. Spray-Away is product of the Bulb of the Month Club, Chicago 90, Ill.

DOCTORS AND PATIENTS simply squeeze the bottle to treat fungus-infected skin areas with Naprylate Powder. Application is neat, sanitary and economical. Bottle is opaque green. Naprylate is made by R. J. Strasenburgh Co., Rochester, N. Y.

ANY GAL WOULD WELCOME Mary Lewis Spray Deodorant. Colorfully packaged in a bright yellow Plaxpak bottle with a green cap, the liquid deodorant is applied with a squeeze of the bottle. Fingers stay unsoiled — bottle is safe and light to carry.

WHAT MAN WOULDN'T WANT this new Alfred Dunhill kit around wherever he is. Lightweight, unbreakable Plaxpak bottles relieve him of weight and worry. He can breeze through his after shave lotion and talc applications several seconds quicker.

★ In addition to its packaging products, Plax makes a wide variety of thermoplastics in rod, sheet, tube, and other forms.

There's good reason for the Plaxpak bottle's steadily growing acceptance. It's unbreakable — safe everywhere with everyone. It provides controlled dispensing — new neatness and convenience in product use. It's light — a perfect traveler. It's colorful and quiet. The public appreciates these plus values and wants them. Your product should have them. So investigate the Plaxpak bottle now — a catalog is yours for the asking.

PLAX BLOW-MOLDED PRODUCTS ARE MADE UNDER THE FOLLOWING U. S. PATENTS 2128239, 2175053, 2175054, 2230188, 2230190, 2260750, 2283751, 2349176, 2349177, 2349178

PLAX
FOR PLASTICS
NOT SUBSTITUTES···IMPROVEMENTS

PLAX CORPORATION, P. O. BOX 1019, HARTFORD 1, CONNECTICUT
In Canada, Plax Canada, Ltd., Toronto

Offices in New York City, Syracuse, Philadelphia, Cincinnati, Chicago, St. Louis and Houston

straight partnership with a super-market grocery store. Owl has been experimenting in super-market operations for a couple of years. In Oakland and Pasadena it has been operating drug stores under the same roof with a super-market, but this store is independently owned and independently run. A wide aisle separates drugs and groceries with each side using its own checking-out stands.

Apparently this arrangement hasn't worked out too well, partly because the customer has to go through two separate purchasing routines, that is standing on line waiting for checking and paying the bill, and in addition competition within the store has been pretty tough on quite a considerable number of items carried both by the grocery and drug departments.

As one of the managers of these stores said, "Competition across the street is okay, but when you have it under the same roof, you have a problem."

Under the new deal Owl has joined up with a local super-market, the Lucky Star, for a new super-super market to be built in Ontario, California. Each company is investing half of the capital and each will take half of the profits. The building and property will cost about $150,000, the store covers an area of 21,000 square feet, bordered on three sides by a parking lot. The location in Ontario, about 40 miles east of Los Angeles, will depend almost entirely on car owners for its customers. The Lucky Star manager will boss the store with the drug section manager working under him. According to Liggett management, Owl has already made plans to open a similar market in October in Santa Ana, California, teaming up again with a local grocery chain,

If these stores succeed, according to President Johnson, "We will be opening similar ones in the 11 western states where we operate. Then Liggett (Rexall's eastern chain) will probably try it out in the east."

Other drug chains around the country are eying this idea with mixed emotions. According to the executive of a large eastern chain, "We are well aware that a housewife goes into a grocery store four times as frequently as she does a drug store." An additional reason, according to another eastern chain store executive, for joining hands in this way is that operating costs for too many single stores have become prohibitive. This man states that the operating cost of the average drug store is 65 per cent higher than that of the super-market—largely because of its size. Rent alone takes up about seven per cent of a drug store's sales volume, while it takes only two per cent of a super-market's volume. He also states that one thing which has delayed the development of the combined drug and grocery super-market in the east is the lack of available ground area near prominent shopping centers and on main highways such as can be found in the west and the southwest. This man states figures which have been reported before in assessing real estate for shopping center developments, which require 100 parking spaces, to do from a million to a million and a half dollars a year, which is generally considered the minimum necessary for an operation of this kind. Using these figures, the potential for the new Ontario store, where there is a parking area for 250 cars, is a gross possible annual volume of $2,500,000 to $3,000,500.

It may be that this substantially increased cost of operation is the basic underlying factor controlling many retail developments which are taking place today. In the department store field the recent report of the Comptrollers' Congress and the Harvard University Graduate School. Department store studies, as well as published earning statements, make it very clear that the larger retail units are doing better than the smaller ones and that the department store chains are doing best of all.

The recent gasoline warfare among independent filling station operators in New Jersey had its real basis in the fact that the large, multiple unit filling stations were operating at considerably less cost than the smaller three to six unit stations, and one expert in the oil industry stated recently that there is a possibility of wholesale failures in the future among the small, independent operators.

Costs such as rent and labor and a multiplied number of operational expenses have brought us to the point where the retail business requires a substantial traffic and volume in order to stay in business. It looks as if the guy in the middle is in for a very tough time, that is between the small fellow, where mama and papa and the kids all work for a living for 25 hours and have no salary except their keep, and the large operator who has the location, the facilities and an operating advantage based on large volume sales.

Keep Cool!

Isn't it wonderful to find so many of your customers in the chips again. It is wonderful, but on reflection it has been a cool summer so that there is not much excuse for not keeping cool.

Here is what your customers have been doing, according to the Federal Reserve Board figures on Department Store Sales. In Boston, July 8 showed a loss of 17 per cent in department store sales compared with retail business of that date last year. On August 5 this turned into a plus of 17 per cent. In Newark, New Jersey, a July 8 minus of 7 per cent turned into an August 5 plus of 24 per cent.

Washington, D. C. had a minus 2 per cent on July 8, but a plus 38 per cent on August 5, while Birmingham, Alabama had a minus of 1 per cent which in less than 30 days was translated into a plus 34 per cent.

Here are the figures for the Federal Reserve District.

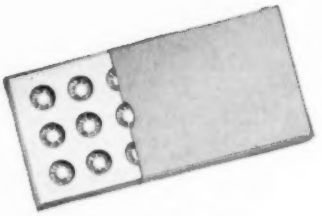
Percentage Change from Corresponding Period a Year Ago

Federal Reserve Dist. & City	*Jan.-May*	*June*	*July 8*	*Aug. 5*
United States	−2	+4	+8	+29
Boston District	−2	−1	−11	+17
New York District	−4	+1	−7	+19
Philadelphia District	−1	+6	−10	+27
Cleveland District	−2	+6	−12	+34
Richmond District	−2	+4	0	+32
Atlanta District	+2	+7	+12	+33
Chicago District	−2	+6	+11	+30
St. Louis District	−2	+4	+9	+27
Minneapolis District	−3	+8	+17	+37
Kansas City District	−1	+4	+12	+33
Dallas District	+6	+8	+21	+43
San Francisco Dist.	−2	+2	+20	+30

Every Type of UNIT PACKAGING

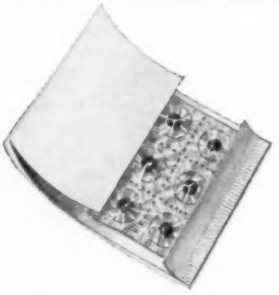
MULTI-UNIT SALE PACKAGE
Carries from 25 to 250 tablets.

DISPENSING PACKAGE
From 200 to 500 tablets, unit-packaged in a single strip, fed through an opening—ready to be torn off as needed.



PUNCHBOARD MAILER
So rugged that it requires no special protective carrier—provides space for advertising and instructions—entirely acceptable to postal authorities.

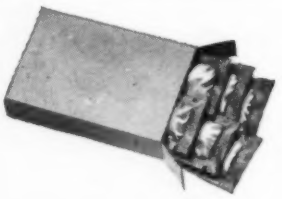
BOOKLET PACKAGE
Provides ample space for trade-name and story of your product—easily adaptable to various over-all sizes and contents up to 24 tablets.



CATCHCOVER PACKAGE
For sampling or small unit-sale package—protective, convenient, attractive.

CREAM OR POWDER PACKAGE
For sampling or standard sale package—produced complete in one operation, with rounded corners and double crimp.

"I L" MINIATURE PACKAGE
A perfect "miniature" of your larger unit—carries any reasonable quantity of tablets, creams or powders and has accurately, located printing both front and back. The most economical, complete package ever produced.



MINIATURE PACKAGE CARRIER
A special, inexpensive, carrier produced by us at high speed, to hold several multiples of the day's dose package.

PACKAGE OF THE MONTH
Litrison-Roche—a liver treatment product in two-piece, hard gelatin capsule—each sealed in its own oval pocket of I.L.T. material. 6 capsules—a day's dose—in catchcover folder, for distribution to the medical profession.

You, too, can develop for your product an outstanding package from one of the basic types shown above. At the same time you find at your service, the facilities of the world's largest and finest contract packaging establishment—and the "know-how" of 30 years' experience in the specialized field of unit-packaging. For the finest packaging at least cost, look first to . . .

UNIT PACKAGING HEADQUARTERS

IVERS-LEE COMPANY, NEWARK, N. J.

SANITAPE — THE SEAL OF PACKAGING PERFECTION — SEALTITE

All packages illustrated above are covered by one or more patents and are available only through the Ivers-Lee Packaging Divisions—licensees or Associated Companies throughout the world. Imitating infringers are subject to legal action.

Toilet Essence

Lentheric is introducing a new product backed with heavy promotion which may prove a very definite challenge to the perfume business and bring an entirely new conception of fragrances to this country.

The new product is called Toilet Essence and is described as "more lasting than toilet water . . . less costly than extract, a long-lasting fragrance to be used lavishly." The odors Tweed and Repartee in two ounce sizes of toilet essence will sell for $2.50.

It has long been the contention of some people in the perfume business that the serious under-consumption of fragrances in this country is purely an economic question. The cost of a bottle of perfume is an economic hazard to the vast majority of people in this country, and it is for this reason that perfume purchases are so predominantly in the gift classification, and is the reason why perfume sales bloom and bust with flush and depressed economic circumstances. The American public has not been impressed by the statement of some manufacturer that the consistent use of perfume costs only a few cents a day. What they are thinking about is the initial investment of $12.00 or more per ounce for a good perfume. Toilet waters and colognes have been priced at an economic level open to most people and have therefore attained a large volume as one of the primary products of our trade.

But manufacturers have generally kept the concentration of toilet water and cologne at a point where it would perform the true functions of these products but not satisfactorily expand into the use of perfume for perfume's own particular function.

In the past many attempts have been made to break down this economic barrier in fragrances and to open up for the fragrance industry, if not a mass market, at least a majority market approaching the use of lipsticks.

Some years ago Leigh, under new management, spent a very great deal of advertising money in four-color pages in the mass woman's magazines to convince American women that an excellent perfume could be made and sold for $3.50 an ounce. Although the perfumes were excellent this project went by the boards largely because almost universally women have been educated to judge perfume quality almost entirely on the basis of price.

Not so long ago Matchabelli made a valiant effort to cut this knot, offering a highly concentrated cologne which could be used as a perfume. There was no evidence that this met with conspicuous success, probably because cologne, as well as toilet water, has been successfully entrenched in a well-known groove of usage through years of promotion.

Lentheric's Toilet Essence appears to avoid all of these difficulties. If it succeeds in its objective of making a fragrance that can be used like a perfume accessible in an economic way to serve millions of women who are steady and prolific users of cosmetics, but rare and infrequent users of perfumes, then a very constructive step forward has been taken by this company which would prove of vast significance to the perfume and cosmetic industry.

We do not believe that the success of Toilet Essence will reflect in any way unfavorably on the sale of perfumes. In fact, it could very well, over a period of time, substantially enhance perfume sales. Nor do we think it would have an unfavorable effect on colognes or toilet waters. These products have a firm hold in a definite field of application.

What toilet essence could do, and we hope sincerely that it will, is to persuade several millions of American women, who are now very infrequent users of perfume, to become regular and consistent users of a daily fragrance application.

Good luck to Lentheric.

Department of Commerce Monthly Retail Trade Report

Retail sales of all kinds in drug and department stores showing sales for the month of June 1950 as compared with the same period in 1949.

	Department Stores	*Drug Stores*		*Department Stores*	*Drug Stores*
Atlanta	+1	+1	Minneapolis	+7	+5
Baltimore	+5	+1	Milwaukee	+6	+3
Birmingham	+6	-1	Newark	+2	-6
Boston	-2	+2	New York	-1	0
Chicago	-3	-2	Philadelphia	0	-1
Cincinnati	X	+2	Pittsburgh	+5	-1
Cleveland	-1	+4	Providence	-4	+3
Dallas	+12	+12	St. Louis	0	-8
Detroit	+7	+8	San Francisco	0	-3
Los Angeles	-2	-3	Seattle	+5	+5

Not Yet

It is reported that some of the chemical and raw material suppliers are opening their safes and dusting off their formulas for substitutes just in case they are quickly needed.

So far there has been no report that the substitutes for these substitutes have been removed from the archives.

Food Store Distribution

Not too many people in this industry realize the extent to which many manufacturers of basic toiletries have been reaching out to the super-market and food store for mass distribution.

The record of this spread is showing up pretty clearly in the consumer panel published by a number of newspapers using this formula. Just recently we checked this situation in the Consumer Analysis published by the Sacramento Bee.

The following table shows the distribution in grocery stores of the leading brand in each classification. Groceries "A" and "B" are those which do over $50,000 a year and those of "C" and "D" are the stores which do less than $50.000 annually.

SACRAMENTO

	GROCERIES A & B	*GROCERIES C & D*
TOOTH PASTE	88%	82%
TOOTH POWDER	72%	55%
LIQUID SHAMPOO	75%	82%
CREAM SHAMPOO	47%	36%
HAND LOTION	69%	77%
PERMANENT WAVE KITS	34%	18%
SAFETY RAZOR BLADES	91%	91%
REGULAR SHAVING CREAM	59%	55%
BRUSHLESS SHAVING CREAM	59%	64%

NEW PRODUCTS AND NEW PACKAGES

AMERICAN FERMENT CO., INC. has introduced Plancello Tablets, a new bulk laxative in tablet form which combines refined methylcellulose and purified psyllium from Plantago loeflingii, with vitamin B_1 added. The tablets are said to supply a maximum amount of effective, soft, moist lubricating bulk in minimum dosage without causing bloating or abdominal discomfort.

ELIZABETH ARDEN recently added the following items to her line of cosmetics: a different red shade for fall in the Surprise Lipstick, Nail Lacquer, and Cream Rouge and the new Long Lipstick in twelve shades, Ciel D'Or, a pencil-slim swivel stick which extends two inches and is so delicately pointed that it traces a smooth, graceful line.

BRAYTEN PHARMACEUTICAL COMPANY has introduced Pyrabrom, a recently discovered drug compound, which is said to be effective in the treatment of premenstrual tension and motion sickness. The compound is being distributed under the trade-mark of Bromth.

BRISTOL LABORATORIES INC. has announced the preparation of Vycom B Plus Tablets, orange sugar-coated tablets containing generous amounts of the several Vitamin B Complex factors plus fresh yeast and Vitamin C.

CHLOROPHYLL PRODUCTS CO. is ready to distribute Squairs, a breath deodorant in the form of small, pale green pellets whose basic ingredient is chlorophyll. The action of the deodorant is to blend and destroy such aromatic gases as are formed by eating foods, smoking or drinking alcoholic beverages. Six pellets in an individual box will sell for ten cents.

PARFUMS CIRO, INC. is presenting Acclaim, a new perfume, this fall, in time for the Christmas season. It is available in classic bottles at $5, $7.50 and $12.50 with matching Eau de Toilette at $2.75 and $4.50.

COLGATE-PALMOLIVE-PEET CO. is presenting a new Palmolive After Shave Lotion, which is available in two sizes, a 5-ounce bottle at 49 cents and a 2-ounce bottle at 25 cents.

DERMETICS, INC. has introduced Artist Portrait Make-up Fluid Color, a glowing color-foundation compatible with the Dermetics Ageless Beauty Program. The color range of six shades is designed to complement the Dermetics Moisture Resisting Powder Shades.

DOME CHEMICALS INC. recently developed the following products: Domogyn, an acid douche powder containing Penamine, a new wetting agent, indicated for leucorrhea, non-specific vaginitis, trichomonas vaginalis, feminine hygiene, among other conditions; Kolpix "A," a greaseless whole crude coal tar ointment to be used for the vesicular, oozing type of skin eruptions; Vi-Dom-"A" Spheres, non-gelatin pill containing 50,000 units of synthetic Vitamin A, and Vi-Dom-"A"-Creme, a greaseless, washable ointment containing 100,000 units of the synthetic vitamin per ounce.

DYBASIK DENTIFRICES has added a five-ounce economy size tube of toothpaste to its line of ammoniated dentifrices.

ENDO PRODUCTS INC. has announced the availability of Tubadil, a new preparation for the relief of muscle spasticity. It is a repository injection of d-tubocurarine for securing prolonged relaxation of voluntary muscle spasm whether or not pain is present. The d-tubocurarine chloride is released slowly and uniformly to allow efficient absorption; it is said to be stable, may be readily transferred to the syringe, and does not separate.

THE GLESSNER CO. has prepared a new drug product known as Drake's Children's Aspirin, each tablet containing a half grain of U. S. P. pure aspirin, sweetened and flavored. Each bottle contains 70 tablets.

DOROTHY GRAY has introduced a new color, Red Trey in lipstick and nail polish, a combination package of which is offered at $1.50. The Red Trey also comes in individual lipstick, nail polish, cream rouge, and rouge compact.

RICHARD HUDNUT'S Christmas plans feature four new packaging ideas, starting with the Gemey Toilet Water which is packed in a carton replica of the first Richard Hudnut Pharmacy in the Gay Nineties. Additional designs include the Hudnut Kaleidoscope containing fresh meadowsweet Yankey Clover Toilet Water or Cologne or the dewy fresh fragrance of Violet Sec Toilet Water; the Shadow Box, a foil box with doors opening to show a toilet water or perfume; and DuBarry Petite Modiste, a miniature pink foil hatbox with satin ribbon loop which holds two fragrant DuBarry bath aids—DuBarry Cologne Concentre and DuBarry Talc Sachet.

LEDERLE LABORATORIES is introducing Normocytin Vitamin B_{12b} and B_{12} Tablets, each of which contains

30 micrograms of Vitamin B_{12}, as a supplement to other treatment for all the megaloblastic anemias (except that of pregnancy). Normocytin Vitamin B_{12b} and B_{12} is also available as a liquid concentrate for parenteral administration in the treatment of pernicious and other anemias in vials of I and 10 cc. Triple Sulfas Suspension, another dosage form of Lederle's tri-sulfonamide product is now available for prescription use. It combines Sulfadiazine, Sulfamerazine, and Sulfamethazine in a cocoa-cream flavored emulsion which 0.167 gram of each of the three most effective sulfonamides per teaspoonful.

LUCIEN LELONG, INC. is offering Round Trip, a new perfume traveler which is a combination of Orgueil fragrance and a luxurious gold, jeweler-tailored box with a close-fitting satin lining. Each Round Trip case top snaps back into place, insuring a safe journey from baggage car or handbag to the dressing table.

NORTHAM WARREN CORPORATION is marketing Cutex Pearl Brilliance, an irridescent nail polish which retails at 39c. It comes in four shades, Cotton Candy, Pink Spangle, Star Bright, and Prize Posy.

THE NORWICH PHARMACAL COMPANY has introduced Directals, a faster-acting hemorrhoidal suppository for the treatment of piles.

PACQUIN, INC. has developed Silk 'n Satin Lotion, a new, lanolin-rich beauty lotion for hands and skin. Soft pink in color and delicately scented, this extra-creamy lotion disappears quickly leaving no sticky or greasy feeling.

PARFAIT SALES has introduced a new novelty sachet line in a series of colorful fuzzy "Cinderalla" characters, inspired by the Walt Disney movie. The line includes Cindy, Lucifer, the black cat; Bruno the hound; among others. Except for the love birds, which appear as a pair, all the sachets are individually packaged in clear, transparent plastic containers.

PARKE, DAVIS & CO. is offering 50-mg. Chloromycetin capsules, especially suited to pediatric practice, and Kutrol, an extract of pregnancy urine, which has been found to be effective in the treatment of crateriform duodenal ulcers and does not inhibit gastric secretions when given orally.

Parke, Davis & Co. has also released Orygene, a chewing troche containing 10,000 units of crystalline potassium penicillin-G, and prepared with a chicle chewing-gum base resembling popular chewing gum in consistency and flavor. It does not require refrigeration. Orygene is indicated in the prevention and treatment of Vincent's infection, gingivitis, secondarily infected cankers, and other infections of the mouth and throat.

HELENE PESSL INC. is introducing a new addition to its Little Lady Deb line of Toiletries for the eleven-to-fourteen-year-old girl, in the Toilet Water and Body Sachet Powder, both of which are packaged in the new squeezable plastic bottle and topped with the daisy which contains a hidden supply of solid perfume.

PITMAN-MOORE CO. is offering Tablet Hytrona, a companion to Elixir Hytrona. The tablets contain the belladonna alkaloids in standardized, balanced proprotions, with phenobarbital added. They are nontoxic in recommended dosage and may safely be given for the relief of spasmodic conditions such as pylorospasm, spastic constipation and spastic colitis.

POND'S EXTRACT CO. recently displayed the new Angel Face Mirror Case which contains a full sized mirror and velour puff. The cover of the case is decorated in the traditional Pond's Dreamflower posies outlined in gold.

REVLON PRODUCTS CORP. has developed Nail-Fix for mending broken nails, provided the broken piece is attached in part. A small piece of Nail-Fix tissue is saturated with Nail-Fix and placed over the broken or split area. After the nail has dried Revlon base coat and be applied, and then the Revlon Nail Enamel.

THE RILLING COMPANY is ready to distribute Rill-O-Whip Shampoo, a new shampoo in a pressure package, containing sufficient lather for more than forty double shampoos.

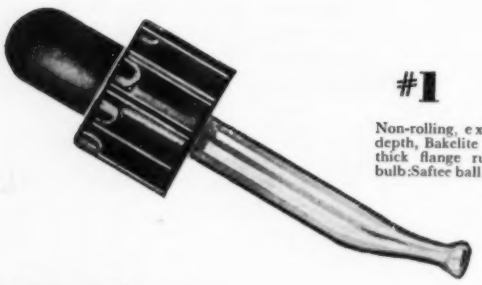
SCHENLEY LABORATORIES, INC. announce the availability of Aquacillin-A.S., an aqueous suspension of Procaine Penicillin G for intramuscular injection. It is ready for instant use and may be stored for as long as one year at room temperature. The suspension is supplied in 1-cc. vials of 300,000 units, 5-cc. vials of 1,500,000 units, and 10-cc. vials of 3,000,000 units, and a vial with disposable cartridge syringe (300,000 units).

THE UPJOHN COMPANY has introduced Minacap Capsules which contain a mixture of the essential fat and water-soluble vitamins, with minerals for use in conditions where increased demand for these factors exists. The inclusion of vitamins A, D and C, iron, calcium and phosphates provides a well balanced formula said to be useful during the increased nutritional requirements of pregnancy, lactation and growing children.

WINTHROP STEARNS INC. is offering Calirad Super, a potent vitamin and mineral formula in capsule form, which is indicated primarily for use in pregnancy, although it is also valuable for correcting other nutritional deficiencies. Winthrop has also made available five important drugs in automatic injectable 1-cc. ampuls for instantaneous use by physicians. These drugs are Luminal sodium, Procaine penicillin aqueous suspension, Procaine penicillin "G" with aluminum monostearate fortified, Salyrgan-Theophylline, a mercurial diuretic, and Demerol, 100 mg. 2cc., an important analgesic.

NEW PERFECTION = DROPPING PARTS

QUALITY UNIFORMITY CLEANLINESS SERVICE



#1

Non-rolling, extra-depth, Bakelite Cap; thick flange rubber bulb; Saftee ballglass.

#3

Regular plastic cap; thin flange rubber bulb; semi-blunt glass.

#4

Metal cap; oil-resisting Amekine synthetic rubber bulb; blunt glass.

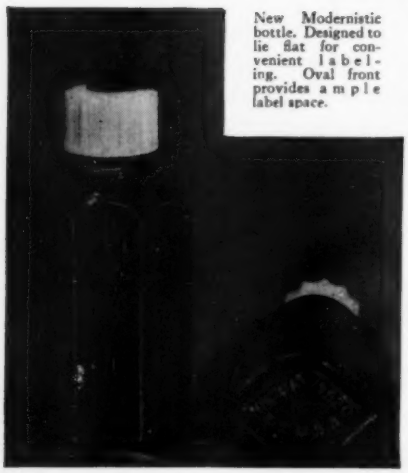
By the Originators and World's Largest Manufacturers of Screw-Cap Dropping Parts

Since 1931, when the screw-cap dropping part was originated by Pennsylvania Glass Products, the world-wide acceptance of New Perfection has been increasing. The fact that the New Perfection Dropping Part is the most practical and sanitary dispensing unit for liquid preparations accounts for its popularity and the steady growth of our operations is due to the efficiency with which our products are manufactured and distributed.

Our exacting standards for quality, uniformity and cleanliness guarantee that each shipment will meet your most rigid specifications. Our policy is to produce and sell the best in dropping parts—and thus merit your continued patronage in the future as we have in the past.

#2

Non-rolling, extra-depth, Bakelite cap; thick flange rubber bulb; special bent glass (CALIBRATED in color).



New Modernistic bottle. Designed to lie flat for convenient labeling. Oval front provides ample label space.

New Perfection Dropping Parts, either plain or CALIBRATED IN COLOR, can be supplied to fit your bottle or with our new Modernistic style bottles. Our bottles are available in Amber, Blue, Green or Clear glass in 2 cc, ⅛, ¼, ½, 1 and 2 oz. capacities. Special oil-resisting AMEKINE synthetic rubber bulbs can be supplied for use with oil products, or natural rubber bulbs for general usage.

Write for Samples and Quotations

PENNSYLVANIA GLASS PRODUCTS CO. INC.

"Glass Goods of the Better Kind"

430 N. CRAIG ST. • PITTSBURGH (13), PA., U.S.A.

*Fully protected by U. S. Patent 2,491,947. Foreign patents pending.

a patented* method for printing polyethylene bottles

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NEWS...

Bymart, Inc. Introduces Tintair

The newly formed company of Bymart, Inc. is introducing to the national market this month a new type of hair coloring, Tintair, which is said to enable a woman to do a professional job of hair tinting in her own home without previous experience and at a cost of about two dollars with guaranteed results.

Martin L. Straus 2nd, former board chairman of Eversharp, Inc., heads Bymart as president and chairman of the board, and Carl Byoir, board chairman of Carl Byoir & Associates, Inc., is vice-president and chairman of the executive committee. Additional executives include Leo Strauss, a former vice-president of Eversharp, as executive vice-president and treasurer; Francis C. Reed, member of the law firm of Hughes, Hubbard & Ewing, as secretary and general counsel; Phil Kalech, formerly executive vice-president and director of sales for the Toni Company, as sales director. Mr. Kalech, who was also associated with the Colgate-Palmolive-Peet Company and the Pepsodent Company in an executive capacity, will be assisted by a force of sales people, many of whom worked with him in the merchandising of the Toni home permanent wave.

He has already appointed the regional and district sales managers, including three regional executives, who are Byron Nelson of Los Angeles, for the western states; Hugh Smith, of New York, eastern states; and Nat Kalech, Chicago, central states.

Sales districts in the western states area, including Washington, Idaho, Montana, California, Arizona, New Mexico, West Texas, Nevada, and Utah will be managed by Hal Silverstein, San Francisco; Stuart Schweit, Encino, Calif.; and Sam Hughes, of Seattle. Districts in the eastern states will be managed by Edmond LaFond of Boston; Jack Sirkin, Newark; Walter W. Cadger, New York; and Paul M. Williams, Rochester.

District sales managers for the central states are R. J. Noland, Memphis; Arnold N. Christensen, Denver; Arnold Jaffee, Milwaukee; George S. Atkin, Bay Village, Ohio; Arnold A. Goldman, Chicago; and W. Glenn Stewart, Atlanta.

General Sales and merchandising operations are now being conducted from offices in the Empire State Building, New York, but will be moved to 677 5th Ave. about November first.

PHIL KALECH

HUGH SMITH

JOHN S. HEWITT

Named Exec. V.P. of Pitman-Moore

Hibbard O. Ball has been appointed executive vice-president of Pitman-Moore Co., division of Allied Laboratories, Inc. He has been associated with the company over 20 years, during which time he served as a medical service representative, manager of the company's eastern region and New York branch, and secretary. Mr. Ball is also assistant secretary of Allied Laboratories.

Hercules Powder Plans Conference

Hercules Powder Company has announced a conference of technical editors, to be held at the Experiment Station of the company in Wilmington on October 2 and 3. Charles A. Higgins, president, will open the conference by a talk on Hercules' position in the chemical industry, while each general manager of the company's major departments will be available to discuss broad operations of his department.

To Enlarge Plasma Facilities

Sharp & Dohme, Inc. has made a contract with the Armed Services Medical Procurement Agency to construct additional blood plasma processing facilities at West Point, Penna., in order to assist in meeting the Country's emergency medical requirements.

Hewitt Appointed by Anahist

John S. Hewitt, vice-president of the Andrew Jergens Company for 12 years, has been appointed general manager and vice-president of the Anahist Company. This is a newly created position.

Ketchum Buys Lambert & Lowman

Ketchum & Co. has purchased Lambert & Lowman, Detroit, according to Harold M. Altshul, president of Ketchum, and Louis K. Lambert, president of Lambert & Lowman. Robert Fleischer, who has been appointed general manager, will work with the present Lambert & Lowman staff to provide increased service to retail druggists of the Detroit area. Mr. Lambert and his wife, former managers, are remaining with the company.

This acquisition by Ketchum, the fourth in recent years, follows the purchase in 1945 of E. J. Barry, Inc., New York; the Averbeck Wholesale Drug Co. of Youngstown, Ohio, in 1948; and Milcon Drug of Cleveland, now being operated as Cleveland Wholesale Drug, in March of this year.

Stauffer Constructing New Lab.

Stauffer Chemical Company has begun construction of a new research and development laboratory at Dobbs Ferry, N. Y., which, when completed, will house the research staff of the company's eastern division, at present scattered in and around New York City. John F. Crowther, director of the firm's eastern research division, will be in charge.

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Hicks Named Gen. Mgr. by Armour

Thomas Edward Hicks, formerly Executive vice-president of a New York advertising agency and vice-president and director of Johnson & Johnson, has been appointed general manager of the Armour Laboratories, according to F. W. Specht, president.

He will direct manufacture and distribution of the new drug ACTH and other pharmaceuticals of animal origin, including thyroid and liver preparations, insulin, and adrenal and pituitary preparations. John R. Mote, M.D. will assist Mr. Hicks, while Dr. Joseph A. Hubata will succeed Dr. Mote as medical director. Additional appointments to the Armour Laboratories medical staff include Dr. A. H. Holland, Jr., formerly director of the office of research and medicine of the Atomic Energy Commission, and Dr. Richard J. Meyers.

THOMAS E. HICKS

Present Scientific Papers

Dr. Maurice L. Tainter, director, and Dr. A. M. Lands, head of the pharmacological section of the Sterling-Winthrop Research Institute, presented scientific papers at the 18th annual International Physiological Congress at Copenhagen, Denmark, August 15 to 18. Dr. Tainter discussed research on the sympathomimetic amines at the Institute, which led to the development of Isuprel, the drug now offered by Winthrop-Stearns for the treatment of asthma. Dr. Lands described the chemistry and pharmacology of a series of nine new atropine-like derivatives synthesized at the Institute.

Riker to Construct New Plant

Riker Laboratories, Inc. is building a new pharmaceutical plant in Los Angeles for the production of Veriloid which is used in treatment of hypertension. The plant is expected to begin operation during the Fall of 1950.

Fein Returns From Business Trip

Joseph H. Fein, treasurer of Florasynth Laboratories, Inc., recently returned from a three-week trip through Central America and the north coast of South America where he visited Florasynth customers and representatives. He was accompanied by Jose Hernandez, Florasynth export manager.

JOSEPH H. FEIN

Plax Publishes Folder

Plax Corporation has published a four-page folder illustrating and describing new applications of the unbreakable Plaxpak polyethylene bottle, in which 19 products are shown.

Charges Infringement on Patent

Winthrop-Stearns, Inc., New York, has charged Vitamins, Inc. of Chicago, with infringement of its Vitamin D_3 patents and has asked federal court in Chicago for an injunction against further alleged infringement. The vitamin D_3, covered by its patents, is marketed throughout the United States by Sterwin Chemicals, Inc., a subsidiary of Sterling Drug, Inc.

Lever Bros. Begin Construction

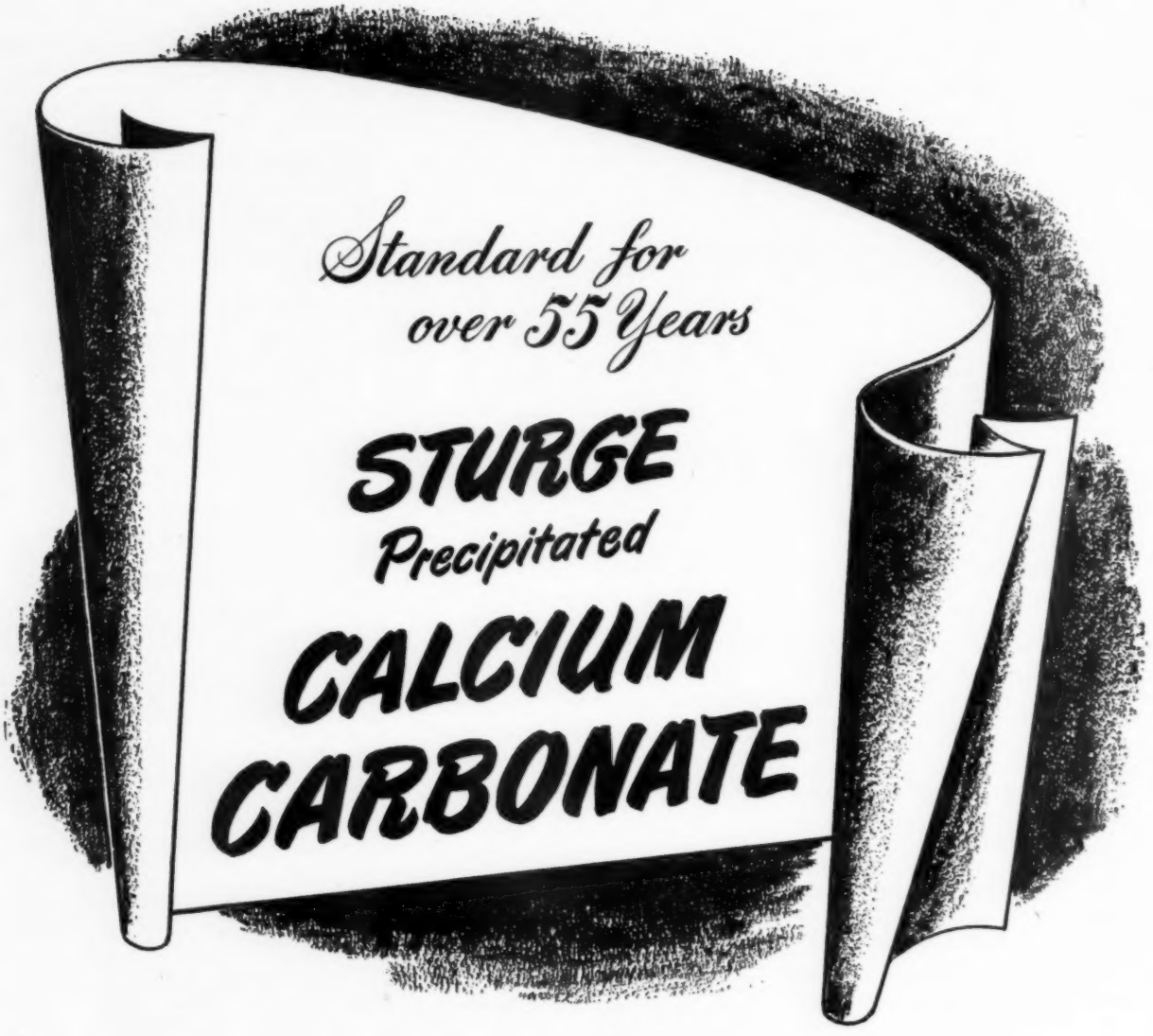
Lever Brothers Company has begun excavation operations in preparation for construction of the new 21-story headquarters at 390 Park Ave., New York. The building is scheduled for completion in early fall, 1951.

Occupying the entire west side between 53rd and 54th Streets, the building will be filled solely by Lever Brothers Company and its major subsidiaries, Pepsodent division, Jelke Good Luck Products division, and Harriet Hubbard Ayer, Inc.

Todt Becomes Bristol Comptroller

Hans C. Todt was named comptroller of Bristol Laboratories, Inc., after serving for four years as assistant comptroller.

Marion B. Tabor (right), secretary of Roure Dupont, Inc., being congratulated by P. J. Coutin, vice-president, on her 25th year with the company. Employees presented her with clock shown in picture. Attending a luncheon at the Marmiton Restaurant in Mrs. Tabor's honor (above) are, left to right, seated, Genevieve Campis, Marian Hughes, Mr. Coutin, Mrs. Tabor, Irene Smith, and Adele Wisner. Standing, left to right, are Jean Delavigne, Mae Weinberger, Edward Galvin, Clarence Long, Louise Eckardt, Charles Taxier, and Joseph Parentini. Mrs. Tabor joined Roure Dupont on August 8, 1925.



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Norda Wins NIAA Award

Norda Essential Oil and Chemical Company received the second place award of the National Industrial Advertisers' Association for 1949 at a luncheon meeting on July 31 at the New York Advertising Club. Blaine Wiley, executive secretary of the Association, presented the award to W. H. Rowse, vice-president of Norda. Mr. Wiley pointed out that Norda had won second place against 206 leading national industrial advertisers.

The Norda campaign was chosen as outstanding for its copy, art and use of two colors, continuity, and selling force in its important chemicals and allied products classification.

Blaine Wiley, executive secretary of the NIAA, congratulating W. H. Rowse, vice-president of Norda Essential Oil and Chemical Co., Inc., on the presentation of the 1949 National Industrial Advertisers Association second place award to that company. Looking on are Fred Gardner, president, and Ralph Bennett, vice-president of Fred Gardner Co., Inc., and E. E. Benedict (left), Norda sales manager.

Eggerss Elected Vice-Pres.

Charles E. Eggerss has been elected vice-president of the newly formed Fibre Drum division of Continental Can Company, according to General Lucius D. Clay, chairman of the board.

The fibre drum plant resumed full production on a one-shift basis early in September, after a suspension of activities since last fall.

CHARLES E. EGGERSS

Named Lady Esther Sales Mgr.

Howard Wilson has been appointed general sales manager of Lady Esther Ltd. for all activities in the United States and Canada.

HOWARD WILSON

Attend International Meetings

Dr. D. K. Kitchen, vice-president of Bristol-Myers Company, and medical director of Bristol Laboratories, Inc., and Dr. Charles R. Rein of New York University, sailed for Europe on August 23 to attend several international meetings on the invitation of the United Nations' World Health Organization. After conferring with head W. H. O. personnel at the Palais de Nations in Geneva they proceeded to the first meeting at Helsinki, Finland from September 4 to 10. Subsequent meetings are being held in Oslo, Stockholm, Rotterdam, and Paris.

Joins Sterling-Winthrop Inst.

Dr. Maurice C. Olivier joined the pharmacodynamic research group at the Sterling-Winthrop Research Institute last month, under the direction of Dr. A. M. Lands, according to Dr. Maurice L. Tainter, director. Dr. Olivier moved to Rensselaer from Beverly Hills, Calif. He succeeds Estelle Ananenko at the Institute, who recently married Dr. O. H. Siegmund, former member of the Institute.

Comm. Solvents Names Directors

Henry V. B. Smith, partner of H. J. Baker & Bro., Leroy A. Lincoln, president of the Metropolitan Life Insurance Co., and Arthur B. Lawrence, senior partner of F. S. Smithers & Co., have been elected to the board of directors of Commercial Solvents Corporation, according to Major T. P. Walker, chairman of the board.

Miner to Receive 1950 Honor Scroll

The 1950 Honor Scroll of the American Institute of Chemists, Chicago Chapter, will be awarded to Carl S. Miner, director and founder of the Miner Laboratories, at a dinner at the Furniture Club, Chicago, on October 13. In addition to an address by Mr. Miner, the program will include talks by Dr. Ward V. Evans, professor of Chemistry, Loyola University; Dr. F. N. Peters, vice-president of the Quaker Oats Company, and Dr. Barbara Miner Parker, of the Miner Laboratories.

Appointed by Curtis Industries

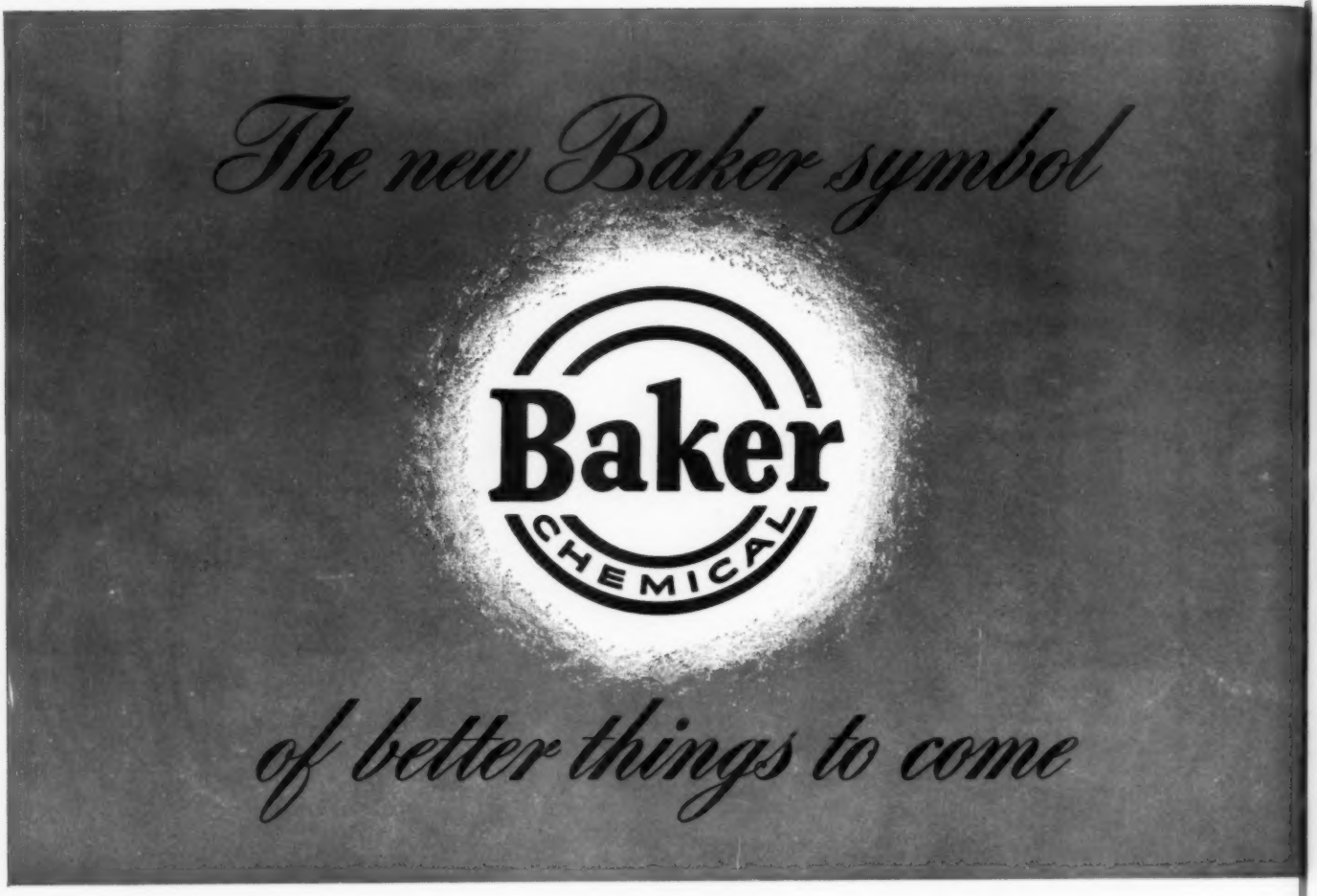
Helene Curtis Industries, Inc., Chicago, has appointed George M. Factor vice-president in charge of advertising.

Special Sales Representative

Milton S. Samuels has been named special sales representative for Squeeze Inc., an affiliate of Jules Montenier Inc., according to William A. Wright, vice-president. Mr. Samuels' territory is Illinois, Michigan, and Missouri.

Scheller Appointed by White Labs.

James C. Scheller has been appointed to the staff of White Laboratories, Inc. as assistant to the vice-president in charge of advertising. He was formerly advertising and sales manager of Whittier Laboratories.



You will soon begin to see this new mark of quality on Baker letterheads, chemical packages, advertising and promotion.

Gradually, this new design will replace the old form of this trade-mark . . . a mark long respected. However, the old form is less significant of the growth and present-day activities of the Company.

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For many months, Baker has been working on an ambitious program that challenges our products, our packages, and our services.

These progressive steps are being undertaken so that you may continue to specify Baker Chemicals, confident that you are obtaining the most your chemical dollar will buy — in quality, in satisfaction, in convenience, in service. J. T. Baker Chemical Co., *Executive Offices and Plant,* Phillipsburg, New Jersey.

Baker Chemicals

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Atlas Expands Sorbitol Plant

The Atlas Powder Company is expanding its sorbitol plant in Wilmington, Del. by about 50 per cent, according to Isaac Fogg, president. Increased production is expected to begin in October.

Dr. Dick Joins Upjohn

Dr. Leo A. Dick has replaced Dr. T. R. Noonan in the product information department of the medical division of the Upjohn Company, according to Dr. E. G. Upjohn, medical director.

LEO A. DICK

Abbott Begins Construction

Abbott Laboratories has started construction on a $283,000 addition to the development laboratory building at the North Chicago plant, which is expected to be ready for occupancy early next year. The project will more than double the size of the existing one-story building, adding approximately 24,000 square feet of floor space. Included in the addition is a section housing three stories of development laboratories for chemical engineering, antibiotics and biochemistry, a conference room, and office of the development director.

Submits 10,000th Suggestion

Marjorie Merrett, a supervisor in the finishing department, Abbott Laboratories, received a special award recently when she submitted the 10,000th suggestion for improved production methods and processes. She was presented with a Mixmaster by Dr. Ernest H. Volwiler, president.

Present at the ceremony were James F. Stiles, Jr., vice-president and treasurer; Ferdinand H. Young, vice-president in charge of production; Hugh D. Robinson, director and plant superintendent; K. F. McMinn, Miss Merrett's department manager, and David J. Evans, chairman of the suggestion committee.

Rhodes Names Representative

Rhodes Pharmacal (Canada) Ltd. has appointed Fieldwell Products Limited, 736 Wellington St., Montreal 3, as sole Canadian representative for Imdrin, arthritic pain reliever.

To Be Medical Service Director

Bert W. Chiappini, Denver division manager for the Smith-Dorsey Company, will become medical service director at the home office in Lincoln, Nebraska, in October.

BERT W. CHIAPPINI

Dr. Rittenberg to Lecture

Dr. D. Rittenberg, associate professor of Biochemistry, College of Physicians and Surgeons, will deliver the first lecture of the Rudolf Schoenheimer Memorial Lectureship on October 5 at 8:30 p.m. in the auditorium of the New York Academy of Medicine, New York. The subject of the talk will be "The Relation of Studies on the Metabolism of Cholesterol to Recent Developments of Biochemical Thought."

Cosmetic Chemists Hold Meeting

The first meeting of the fall quarter of the Chicago Chapter of the Society of Cosmetic Chemists was held on September 12 at Henrici's Restaurant. Dr. H. Heinrich of Kolmar Laboratories spoke on "Stability Testing of Lipsticks, Face Powder, Rouges and other make-up items," Gustav S. Carsch, district manager of Polak & Schwarz delivered a talk on "Stability Testing of Perfumes, Colognes and other essential oil products," Dr. Colburn of Colburn Laboratories discussed "Stability Testing of Emulsions," and Gene Rose of George Barr & Company talked on "Stability Testing of Aeorsol Products."

Fibre Box Group Formed

Producers of corrugated and solid fibre containers formed an organization known as Weatherproof Fibre Box Group during a meeting at the Blackstone Hotel, Chicago. Membership to this voluntary, unincorporated, and non-profit association is open to all producers of corrugated and solid fibre containers.

John V. Spachner, executive vice-president of Container Corporation of America, was elected chairman, while two vice-chairmen will be elected, along with the appointment of operating committees at the next meeting scheduled for September 19. General Everett Busch, commanding general of the Chicago Quartermaster Depot, Colonel H. A. Johnson, L. E. Clayton, and Henry Brinker of the Depot attended the organization meeting and informed the group of the immediate government needs and estimated demands for the next six months.

Marjorie Merrett, a supervisor in the finishing department of Abbott Laboratories, being presented with a Mixmaster by Dr. Ernest H. Volwiler (left), president, for submitting 10,000th suggestion. K. F. McMinn, Miss Merrett's department manager is looking on.

THIAMINE HYDROCHLORIDE, U. S. P.

Comparison	U. S. Pharmacopoeia	Roche*	
		Regular Type	Ampul Type
Purity (Dry Basis)	98% Minimum	99%+	99%+
Moisture	5% Maximum	0.75—2.0%	2.0—3.5%
		*Usual Commercial Average Range	

REGULAR TYPE

This material meets all U. S. Pharmacopoeia specifications for Vitamin B_1. The International Conference on Vitamin Standardization has adopted crystalline Vitamin B_1 Hydrochloride as the standard for this vitamin and defined the unit as the biological activity of three micrograms of this standard.

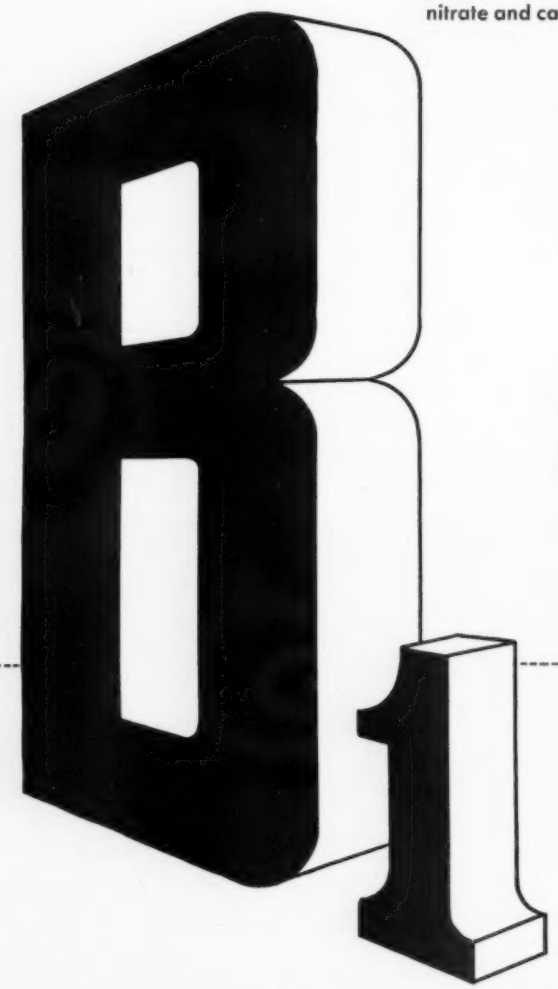
AMPUL TYPE

This material in addition to meeting U.S.P. specifications is especially prepared and recommended for the manufacture of parenteral solutions. Developed by Roche specifically for this purpose, its quality has been consistently improved and in early 1949 the Roche G.I.G. (Gassed in Glass) packing was adopted.

THIAMINE MONONITRATE • 'ROCHE'

This derivative of Thiamine may have certain advantages in certain types of dry products. If you have an unusual stability problem, we shall be glad to cooperate in running comparative tests of the two salts in your own formulae.

Roche is in commercial production of the mononitrate and can make immediate shipment in quantity.



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Thiamine **Riboflavin**
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Pyridoxine **Panthenol**
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'ROCHE'

VITAMIN DIVISION
HOFFMANN-LA ROCHE INC.
NUTLEY 10, N. J.
Pacific Coast: L. H. Butcher Company
San Francisco Los Angeles
In Canada: Hoffmann-La Roche, Ltd. Montreal, Que.

I. F. Schnier Appoints

Andrew W. O'Neill and Brandt Brereton have been placed in charge of the branch office of I. F. Schnier Company, Inc. at Los Angeles. They are succeeding John B. McCandless who has resigned from the company.

McClure Appointed by Lever

John F. McClure has been appointed to the newly created post of merchandising manager of the Pepsodent division of Lever Brothers Company, according to Charles T. Lipscomb, Jr., president.

JOHN F. McCLURE

Joins Lueders 25-Year Club

Frederick Pfeifer joined the Twenty-five Year Club of George Lueders & Co. last month as the forty-fourth member. A luncheon was given in his honor at the Drug and Chemical Club, during which he received a service pin and wrist watch from the company, as well as gifts from the officers and employees. Mr. Pfeifer is connected with the traffic department of the company.

Anchor Hocking Appoints

Frank Baumgardner has been named manager of market analysis and development of the Anchor Hocking Glass Corporation and has been replaced as manager of the company's Chicago office by Bernard P. Fox. Brooks Brown, Jr. has become manager of the company's Louisville office, and Brooks Brown, Sr. remains with the office as consultant.

R. S. Aries Changes Address

R. S. Aries & Associates, chemical engineers and economists, have moved their executive offices to 400 Madison Ave., New York. The general engineering offices and drafting rooms will remain at 26 Court St., Brooklyn.

Wildroot Co. Plans Alterations

Wildroot Company has filed plans with the city of Buffalo, N. Y., to make alterations to its building at 22 Fay St. at an estimated cost of $5,000.

Cooke Appointed by Sterling Drug

J. N. Cooke has been appointed marketing coordinator of Sterling Drug Inc., according to James Hill, Jr., chairman and president. A divisional vice-president since 1943, Mr. Cooke has been in charge of the Cummer Company division, Brattleboro, Vt.

J. N. COOKE

Appointed by Physicians' Supply

Donald Bonhaus has been appointed sales manager by the Physicians' Supply Company, succeeding W. W. Carty. Mr. Bonhaus was formerly advertising manager and, more recently, sales manager of the systems division of the Herring-Hall-Marvin Safe Company.

SKF Enlarging Laboratories

A new $1,200,000 wing will be added to the east side of the building of Smith, Kline & French Laboratories in Philadelphia, according to O. J. May, vice-president, and will consist of four floors and a basement. The total addition of 80,000 square feet will increase the size of SKF's building by 20 per cent, and is scheduled for completion in the late spring of 1951.

Wyeth to Move Exec. Offices

The principal administrative and executive departments of Wyeth, Inc. and Wyeth International Limited, Inc. will be located in the new Central Penn Bank Building, N. W. Corner Broad & Walnut Streets, Philadelphia, on the completion of the building about January first, according to H. S. Howard, president. Wyeth will occupy six entire floors in the new building.

Research Unit in London

Dr. Harry M. Crooks, Jr., research chemist of Parke-Davis & Company, traveled to England last month in order to set up a research unit in the London branch of the company. He is expected to spend approximately ten months in Hounslow, a suburb of London, where the branch is located. Dr. Crooks is working in cooperation with L. O. Smith, London branch manager, and his associates in organizing and launching this new department.

Charles Fahrenholz (left), new Market Research Analyst, Cutter Laboratories, checks over product material with Harry Lange, vice-president in charge of finance. Mr. Fahrenholz was formerly associated with the market research department in Schering Corporation.

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SANDUSKY • SAN FRANCISCO • ST. LOUIS • TOLEDO • MONTREAL • PARIS • TORONTO • VANCOUVER • WINNIPEG

Eaton Appointments

Dr. William B. Stillman has been appointed director of the Research and Development staff of Eaton Laboratories, Inc., according to Howard S. Sumner, president. He succeeds Dr. Ralph H. Bullard who has resigned the position to resume his former position as professor of Chemistry at Hobart College, but who will remain with the company, however, in a consultant capacity. Dr. Stillman served under Dr. Bullard as assistant director of Research and Development at Eaton for many years and was co-discoverer with Dr. M. C. Dodd of the antibacterial powers of the nitrofurans including Furacin, which they reported in 1944.

DR. WILLIAM STILLMAN

Additional appointments include those of Dr. A. Kenneth Petretti as assistant medical director, who will serve under L. Eugene Daily, M.D., medical director; Dr. John A. Yurchenco, as head of the division of Bacteriology; Dr. Solomon Michaelson, as pharmacologist; and Gordon Smith, as control bacteriologist.

Breuer Moves Office

H. O. Breuer, representative in Mexico of Syntomatic Corporation, has moved his office to larger quarters due to the increase of business on Syntomatic products in Mexico. His new address is Motolinia No. 5-310, Mexico, D.F.

Dr. Closs to Address DCAT

Dr. J. O'Neill Closs, executive secretary of the American Pharmaceutical Manufacturers' Association, will address the DCAT at its 60th annual meeting at Shawnee Inn, Shawnee-on-Delaware, Penna., September 21-23. The only speaker scheduled for the business session on Friday afternoon, September 22, Dr. Closs will speak on "Trade Associations and Industry Problems."

Sterling Drug Moves Exec. Offices

Sterling Drug Inc. has moved its executive offices to 1450 Broadway, New York, according to James Hill, Jr., chairman and president. Former executive offices were at 170 Varick St. The company occupies 160,000 square feet of the 265,000 square feet in the 43-story building.

DR. KENNETH PETRETTI

Winthrop Promotes Kozlicka

Frank Kozlicka, formerly special hospital representative for Winthrop-Stearns Inc. in the Chicago area, has been named midwestern representative of the department of medical research, according to Dr. Justus B. Rice, director. He will cover the Chicago and Minneapolis territory and most of the St. Louis area.

To Represent Amer. Firms in Cuba

Dr. Eusebio Viciedo, of Labs. Domingo Plasencia, S. A., well-known pharmaceutical firm in Havana, Cuba, is desirous of obtaining representation of American Pharmaceutical firms in Cuba. He also announces that his company has facilities for manufacturing pharmaceutical products on a licensing basis, and requests that interested companies contact his firm in Havana, Cuba.

Celanese Appoints Trotter

William H. Trotter, formerly with Innis, Speiden & Co., has been appointed to handle the sales promotional activities of the chemical division of Celanese Corporation of America. He succeeds Robert D. Burleson who resigned.

Haznaw in Lions International Post

L. F. Haznaw of Florasynth Laboratories, Inc., has been appointed Deputy District Governor of the Eastern Region of Lions International, by Charles Schweinler, District Governor.

Kjorlein Promoted by Cutter

Ralph Kjorlein has been advanced from assistant credit manager to the position of credit manager for Cutter Laboratories. He has been active in the credit organizations in the San Francisco bay area and now holds the office of vice-president of the San Francisco chapter of the National Credit Institute.

RALPH KJORLEIN

Bowes Appointed by Searle

Kenyon Bowes has been appointed assistant treasurer of G. D. Searle & Co. by the board of directors, according to John G. Searle, president. Mr. Bowes was formerly connected with the firm of Arthur Andersen & Co. as a senior accountant, working in their Chicago and Detroit offices.

Bjorksten Labs. Purchase Land

Bjorksten Research Laboratories, Inc. have purchased a 168-acre tract of land immediately outside the city of Madison, Wis., according to Dr. Johan Bjorksten, president, which will be used for the construction of buildings to house new testing units, scientific equipment and laboratories.

Fiedlers Adopt Girl

George Fiedler, Kelton Cosmetic Company, and Mrs. Fiedler have announced the adoption of a baby girl, Margret.

To Study Health Plans

An insurance official and a physician have been named consultants to study voluntary health insurance plans which a Senate committee is undertaking as part of a general survey of the national health and of proposals for health legislation. Dr. Dean A. Clark, director of the Massachusetts General Hospital, Boston, has been named director, and Morris Pike, of the John Hancock Mutual Life Insurance Co., is assistant director. Another assistant will be named.

Carter Named Cincinnati Manager

A. E. Carter, formerly assistant manager of the Detroit branch of Parke-Davis & Company, has been named manager of the new Cincinnati branch which was formally opened on September first, according to Harry J. Loynd, vice-president and director of sales and promotion. The Cincinnati branch

A. E. CARTER

which consists of portions of territories formerly served by the Detroit and Chicago branches, includes most of Ohio, northern Kentucky, and southeastern Indiana. The Indianapolis branch has been closed, and is being served by the Cincinnati headquarters.

Bruce Durling Joins Stange

Bruce L. Durling, son of Bill Durling, president and general manager of Wm. J. Stange Co., was recently appointed Coordinator of Sales and Research. Bruce joined Stange in 1940 and has represented the company in a sales capacity on the West Coast for the past four years. The announcement of the appointment is made by Aladar Fonyo, vice-president and director of research.

Named V.P. by Modern Medicine

Lee Klemmer, of the New York office of Modern Medicine Publications, Inc., was elected a vice-president of the corporation at a recent meeting of the board of directors. Mr. Klemmer will continue to represent Modern medicine from his same location.

Appointed Research Director

Dr. Robert L. Frank has been named director of research for Edwal Laboratories. Dr. Frank, graduated from Dartmouth, received his Ph.D. from Wisconsin, and comes to Edwal from the University of Wisconsin Department of Chemistry. Morton Schwarcz will assist Dr. W. S. Guthman, president of Edwal, and Dr. J. F. Kaplan is in charge of manufacturing.

CSC Pharm. Opens New Office

CSC Pharmaceuticals, a division of Commercial Solvents Corporation, has opened a new office in the Poplar Building, 123 North Poplar St., Charlotte, N. C. R. G. Whitesell, who has represented CSC Pharmaceuticals in North and South Carolina, is in charge.

Conferring with F. M. Rivinus (left), executive vice-president of Smith, Kline & French, are representatives of SKF Inter-American Corp., R. P. Wilson, center, general manager and partner of Sociedade Industrial Pharmaceutica, Ltda., Rio de Janiero, and James F. Cordell, regional manager for Brazil, Uruguay, and Argentina.

Renamed Head of Cochran Board

William M. Holmes, president of James McCreery & Co., was re-elected chairman of the board and director of Jacqueline Cochran, Inc. at the annual stockholders meeting, according to Miss Jacqueline Cochran, president. Mr. Holmes is also serving as chairman of the board of Parfums Charbert.

John Powell Appointments

H. Alvin Smith has been elevated from the position of executive vice-president of John Powell & Co., New York, to the post of president of the firm.

W. J. Pollert, vice-president, has been put in charge of all operations. He was formerly in charge of production.

Dr. Alfred Weed, who formerly headed domestic sales, is now director of sales and promotion.

Mr. Smith, a graduate of New York University, joined the Powell organization in 1941, became treasurer in 1943 and vice-president in 1945. When Mr. Powell resigned from the firm in 1948, Mr. Smith was appointed chief executive.

50th Year for Niagara Alkali

Niagara Alkali Company, established in 1900, is celebrating its fiftieth anniversary. The company has distributed cigarette lighters to its friends.

Mills Named V.P. of Winthrop

Sidney C. Mills has been elected vice-president of Winthrop Stearns Inc., assigned to administrative operations, according to Theodore G. Klumpp, president. Mr. Mills has been administrative assistant to the president and assistant treasurer of the company for the last four years.

SIDNEY C. MILLS

Kleinfeld Named to Committee

Vincent A. Kleinfeld, of the Department of Justice, has been named by Congressman James J. Delaney (D., New York), as Chief Counsel of the Select Committee to Investigate the Use of Chemicals in Food Products. Mr. Kleinfeld has been loaned to the committee by the Department of Justice where he is in charge of litigation under the Federal Food, Drug, and Cosmetic Act. Mr. Kleinfeld, long experienced with food and drug law, and co-author of a book, "Federal Food, Drug, and Cosmetic 1938-1949, has been in the Government legal service since 1935, and has served as special assistant to the Attorney General.

The Select Committee, under the chairmanship of Congressman Delaney, is investigating the effects and use of chemicals in production of foods, and the effects of insecticides and chemical fertilizers on food. Hearings will be held in the near future.

Feirer Resigns from Sharp & Dohme

Dr. William A. Feirer has resigned as executive vice-president and director of Sharp & Dohme Inc. according to John S. Zinsser chairman of the board. He joined the company in 1930, later becoming director of biological production and, in 1937, medical director. He was appointed director of the medical research division in 1940, and executive vice-president in 1947.

Named Branch Sales Manager

Malcolm Smith, sales engineer for several years at the home office of the New Jersey Machine Corporation, has been appointed branch sales manager of the Chicago office, to succeed James Parsons who recently resigned.

MALCOLM SMITH

Toni Reorganizes Sales

A series of organizational changes in the sales department of the Toni Company is announced by R. N. W. Harris, president.

Stuart K. Hensley, formerly central regional sales manager, has been appointed to the newly-created position of assistant general sales manager. He will work directly under Harris, who is temporarily serving as director of sales while Bernard Gould, Toni's regular sales director, is working on special assignment.

Walter G. Willie, former Detroit division manager, takes over as central regional manager to succeed Hensley and will headquarter in the company's executive offices in Chicago. He joined Toni as a salesman in Florida four years ago and served as Memphis division manager before taking the Detroit post.

The post of western regional sales manager, with headquarters in Chicago, is being taken by Carle Randall, who for the past four years has served as eastern regional manager. Randall joined Toni as a salesman in 1945, one year after it was founded, and served as salesman and division manager before being promoted to the post of regional manager.

Joseph Salganik, who has been manager of the New York division for the past three years, becomes eastern regional sales manager and will continue to headquarter in New York City. He joined Toni in 1947 after having been associated successively with Colgate-Palmolive-Peet, Pepsodent and V.C.A. Drugs in Newark, N. J.

Robert Wallace, of the Los Angeles division, is moving to New York to succeed Salganik as division manager. Associated with Toni since 1946, Wallace earlier was associated with the Vick Chemical Company. He served as a lieutenant in the Naval Air Corps during the war.

The Los Angeles division now will be headed by George Friedman, former western regional manager.

Dennis Mitchell, formerly of the company's sales promotion department in Chicago, now will head up the Detroit division to succeed Willie. He joined Toni as a salesman four years ago. During the war, Mitchell served overseas as a Navy Lieutenant.

McKeown Appointed by Sharp & Dohme

Dr. George H. C. McKeown has been appointed Medical Administrator in the Medical Division of Sharp & Dohme, according to Dr. J. Murray Scott, Medical Director. He succeeds Dr. J. William Crosson who has resigned. Dr. McKeown was appointed Associate Medical Director of Schenley Laboratories, New York, in 1945, and joined Ayerst, McKenna & Harrison, New York, in 1947 as Assistant Medical Director.

Ferrar Leaves Burroughs Wellcome

Ross J. Ferrar, sales manager of Burroughs Wellcome & Co., has resigned his position with the company to become business manager of the Beverly Hills Clinic, Beverly Hills, Calif. The purpose of the clinic is to make available to the residents of Southern California the most advanced facilities for diagnosis, as well as complete medical and surgical care.

Minor H. Andrews

Minor H. Andrews, head of the toiletries firm of the same name which he founded last year in Chicago, died in that city August 7 at the age of 67. Mr. Andrews had been midwest representative of Bourjois, Inc. for 33 years.

Frederic P. Humphreys

Frederic P. Humphreys, for the past two years proprietor of the Humphreys Drug Products Company, New Preston, Conn., was found dead August 17 on Tuckernuok Island, near Nantucket, Mass. He was fifty-nine years old.

Mr. Humphreys had formerly served as domestic sales manager of the Humphreys Medicine Company of New York.

Dr. Edwin Leigh Newcomb

Dr. Edwin Leigh Newcomb, executive vice-president of the National Wholesale Druggists' Association in New York died in Montclair, September 2, at his home at the age of 67. He had been an officer of the association since 1927 and

EDWIN LEIGH NEWCOMB

executive vice-president since 1943. In April of this year, he received the Remington Medal, pharmacy's highest honor award. Later this month he was to have been honored at a special luncheon in New York.

In the first world war Dr. Newcomb directed production, physiological standardization and supply of digitalis for the Army and Navy, both in this country and abroad. During the Congressional investigation of the Food and Drug Bill in 1935 he advocated that the Federal Trade Commission retain jurisdiction over advertising of products included in the legislative measure.

Dr. Newcomb was a life member of the American Pharmaceutical Association, American Botanical Society, American Association for the Advancement of Science, as well as an editor of several publications dealing with medicinal plant cultivation and pharmacognosy. He had been a member of the board of directors and chairman of the finance committee of the Health Information Foundation since last year.

He is survived by a son, E. Allen Newcomb, of Montclair; a daughter, Mrs. William B. Church, Jr., of Meriden, Conn.; two brothers, Hart S. Newcomb of Vineland and Gilbert R. of Campbell, Calif., and five grandchildren.

E. A. Van Wart

E. A. Van Wart, chief draftsman of Package Machinery Company, died of a heart attack on August 16 at the age of 45. He had been with the company for the past 20 years.

Methocel:

the Efficient Suspending Agent

If you are looking for a better suspending agent, try the *new* Methocel (Dow Methylcellulose). Here is a product that gives you efficient, reliable suspension in solutions of many kinds.

In the drug and cosmetic industries, Methocel is widely recognized as a valuable suspending, film forming, thickening, and dispersing agent. These properties suggest its use in the manufacturing of injectible drugs, dispersed solids, ointment bases, many types of lotions, and emulsions.

The efficient suspending action of Methocel, due to its large molecule, plus its properties as a thickening agent—provides excellent suspension of even large particles. These properties, together with Methocel's use as a film former and emulsion stabilizer, make the *new* Methocel of outstanding value to the drug and cosmetic field.

Methocel, a superior synthetic gum, may be just what you have been looking for to improve your product. Send in the coupon for your *free* experimental sample of the *new* Methocel, *powdered*, and a copy of Methocel News reviewing medical and biological uses. Try it and see the many superior advantages of Methocel.

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THE new Methocel

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Please send free sample of METHOCEL, for use in_____
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A new product coming up?
Your most important decision may be the type of perfume to use.

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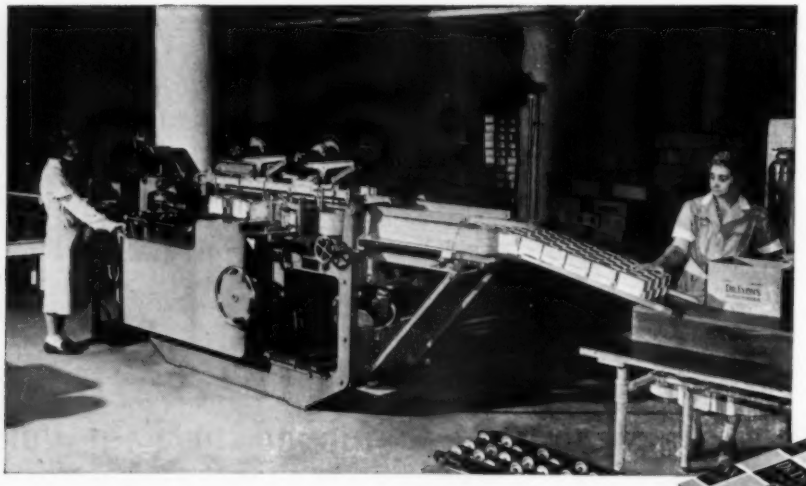

Model F-6 Bundling Machine bundling Dr. Lyons Tooth Powder in plant of R. L. Watkins Co.

More and more all the time . . . are going over to machine bundling!

THE GREAT MONEY SAVER

Packing costs take a dramatic nose dive wherever our bundling machines are installed. There's an immediate saving of up to 60% on material — because inexpensive kraft paper replaces costly boxes. Labor costs are reduced, too, for one operator and one machine can turn out up to 24 bundles per minute. You also save on storage space and shipping costs because the paper used for bundling is so much lighter and less bulky than boxes.

A user who recently installed one of our bundling machines said "Our savings on labor alone will pay for this machine in 8 months to a year." Think of that!

We have bundling machines to meet every requirement, including a new model especially designed for small-size packages. Write our nearest office for full particulars.

Get the cost-reducing facts on machine bundling

PACKAGE MACHINERY COMPANY

SPRINGFIELD, MASSACHUSETTS

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ATLANTA · DALLAS · DENVER · LOS ANGELES
SAN FRANCISCO · SEATTLE · TORONTO · MEXICO, D.F.

MANAGEMENT FORUM

By Francis Chilson
Industrial Consultant

Research Management

Management without actually knowing what research really means will often gamble excessively during periods of lush profits and during periods of high taxes. Research to many officials simply means producing new products with a sales angle as fast as the sales department can handle them. This really is product development especially when the research consists of making new combinations of well known chemicals, but any part of research represents a calculated gamble on the part of management. To talk of pure research divorced from product development in companies having an annual volume of less than $25,000,000, is to my mind silly and bound to be disappointing. Every manufacturer, of course, should contribute as much as he can to pure research, but the work actually should be done in organizations adequately equipped for it. Such contributions should be regarded simply as a contribution to the progress of science without any thought of ultimate individual profit.

Internal research, or product development, represents a calculated gamble. The final efficacy of a research program can be tested only in the field. Let's not kid ourselves. Whatever research men may think of the dignity of science or themselves as scientists their job is to provide products and processes with which the sales department can bat the ears off competition and bring home the bacon, and it is on that "bacon" that the research scientist, the salesmen, the managers and the workers, all have to live.

The first object of research is, therefore, to keep products abreast of competition and to improve the products and processes so that more money can be made on the sale of them. The next function is to develop new products for which a market can be found.

These two premises being true from a practical point of view, management cannot escape the responsibility of making the research department productive any more than it can escape the responsibility of making the sales department productive. Too many managements seem to feel that a research scientist is something of a magician who can pull a rabbit out of a hat out of which the company can make a lot of money. Many, if not most managements, will have no hesitancy about appropriating $100,000 for advertising or marketing purposes but when the research director requests $10,000 he is looked upon as slightly mad. His request may eventually be granted but not until it has been considered by sixteen committees. As a rule by comparison with other departments the research department is underpaid. I have known cases where research men have been bluntly told that the existence of their department represents a gamble on the part of management and that since research men are expensive luxuries they have no right to expect even—in some cases—equivalent compensation until they have discovered the pot of gold at the foot of the rainbow. When the pot of gold is discovered, by accident or otherwise, I have found very few cases where the research men who made the discovery or recognized the value of the accident, have benefited financially in any way. As a matter of fact, I know of only one company which has an incentive plan for research men which is based on the net earnings of products discovered by or through them.

It is management's job to see that the research people have the benefit of all the ideas and information of the sales and other departments. Likewise it is management's job to keep the heat turned on the research department because I am convinced that research people are no different from the rest of us—they work best when the pressure is on.

Manufacturers' Representative

My old friend Joe Persinger, for many years purchasing agent of the Chattanooga Medicine Company, having reached the company's mandatory retiring

Farthest North with Stokes Machines

Rowell Laboratories at Baudette, Minnesota is an economic triumph . . . probably the northernmost complete manufacturing business in the country.

Ted Rowell, in 1935, located his plant in the wilderness on the shore of Lake of The Woods. Here an inexhaustible supply of otherwise worthless and predatory burbot supplies liver oil more potent than codfish.

Cool, clean, dry, naturally air-conditioned surroundings make ideal industrial working conditions.

From a small beginning Rowell Laboratories has developed a long catalog of ethical preparations and a large private formula business.

Manufacturing facilities—Stokes Tabletting machines, granulators, drying cabinets, coating and polishing pans—contribute to the capacity and flexibility needed to handle tablets and capsules from orders of 5000 to quantities in the millions.

Ask Stokes for assistance on tablet formulae, punch and die design, improved procedures.

STOKES MAKES Tabletting Machines, Pharmaceutical Equipment, Tube Fillers, Vacuum and Special Processing Equipment, Vacuum Pumps and Gages, Plastics Molding Presses, Water Stills and Special Machinery.

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☐ *Please . . . a copy of your 32 page STOKES PHARMACEUTICAL EQUIPMENT Catalog.*

☐ *Please send data on Carbide-Tip Punches and Carbide-Insert Dies.*

Reduce tablet costs by using Stokes carbide punches and insert dies . . . check coupon for details.

Name _____ Title _____

Company _____

Address _____

City _____ Zone ____ State _____ AW

age, would like to spend the time until he is a hundred representing manufacturers of packaging materials, raw materials or equipment in the Chattanooga area. Joe is the sort of bird who must keep himself busy and the lively old coot will live until he is a hundred. Even then I expect we will have to kill him to get rid of him. So if any of you reading this need an energetic representative who knows the territory and the people in the Chattanooga area, you can reach Joe through the Chattanooga Medicine Company. I do not happen to have his home address.

Shellcrease

Packers, hard pressed for space, time and material will find Shellcrease a welcome innovation. Shellcrease is the brand name of a new corrugated board that folds in any direction with the ease of wrapping paaper. Minute scoring marks in the corrugation permit folding at any point . . . across the corrugation or diagonally in any direction. It can be rolled against the corrugation just as easily as with the corrugation. A product wrapped in Shellcrease requires no other outside wrapping because the flat surface is high quality Kraft paper. Any kind of fastening can be used such as pressure-sealing tape, twine, gummed tape, staples, stitches or steel strapping. Manufactured exclusively by Shelton Manufacturing Co., Inc., 42-24 Orchard Street, Long Island City 1, N. Y., in stock rolls up to 72″ wide and 250 feet long or in sheets, cut to order. Available in four weights, 35, 55, 70 and 100 pound basis.

Tablet Disintegrator

The next Revision of the U. S. Pharmacopoeia (XIV) and the new National Formulary (9th Ed.) will include a specification for the disintegration time of uncoated tablets in these compendia. In view of the imminence of tablet disintegration as a legal requirement, the Forr Tablet Disintegration Apparatus fills a definite need in the pharmaceutical industry. The design details of the machine are in strict compliance with the proposed standards of stroke and rate. The baskets are constructed to be equivalent to the specifications of the A.P.M.A.-A.D.M.A. Contact Committee's Subcommittee on Tablet Disintegration.

The Forr Tablet Disintegration Apparatus, Model SD, says the manufacturer, is designed for the simultaneous running of two determinations using six tablets per basket. The instrument was designed so that 1-Liter beakers on a ringstand or in a water bath can be used, and the two baskets may be lifted simultaneously from the test medium to determine the end-point, without disconnecting the baskets or stopping the machine.

The apparatus is normally supplied with a controlled-speed 110 V. AC-DC gear-head motor which will maintain smooth agitation well within the rate specified in the official test. The reduction gears run submerged in oil and the assembly needs no further attention. The reciprocating motion is accomplished through the familiar crank action, which operates a simple and rugged scotch yoke. The motion of the tablet test baskets then follows a cycle of simple harmonic motion which is only roughly approximated in cam-operated machines. The driving mechanism is enclosed in an attractive, grey crackle-finish housing with a polished, black Bakelite top. The double-yoke horizontal tree is notched for basket centering and can be adjusted vertically on the driving arm. The vertical stanchion, driving arm and double-yoke basket-tree are chrome-plated. The test baskets are supported by a monel hook and the glass tubes are held in the plastic base by a monel garter-spring, which allows for easy removal and replacement of the tubes. The non-corrosive material construction of the test baskets allows the use of water, artificial gastric or intestinal fluids as test media. Quality material and fine workmanship are combined in this unit to provide a long life of trouble-free operation. Made by The Forr Instrument Co., 904 Sanford Ave., Irvington, N. J.

Useless Filing

A number of companies have solved the problem of what to do about their overcrowded filing departments which have been engulfed by a flood of records arising from the war, the high level of business since 1945, and the weakness of numerous government agencies for multiple forms. The solution, according to the findings of a recently published research study, "Cutting Filing Costs," is the use of retention and disposition schedules; these are developed after a study of legal requirements and management needs of the individual company, and establish the period of time each record must be kept and when it can be destroyed. Thus, all company correspondence and other records are destroyed as soon as they are no longer needed, but never prematurely.

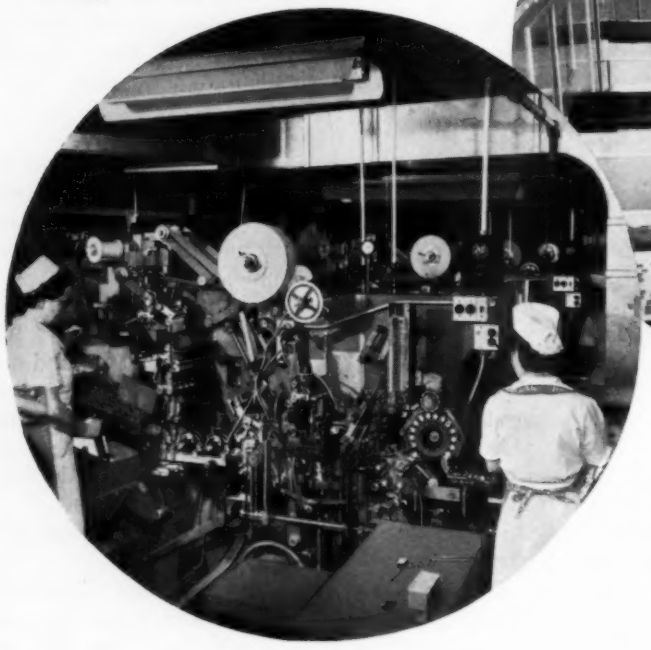
The report, issued by The Dartnell Corporation, Chicago business research publishers, is based on a year and a half of study and field interviews with more than 235 selected companies. Among the organizations whose filing programs are analyzed are the Westinghouse Electric Corporation whose "flow schedules" for records destruction save the company $200,000 a year, and the Sun Oil Company which has been able to discard more than 1,000,000 pounds of paper in the last 3 years.

Few companies, according to the report, realize just how little of the material in their files they actually need. About 35 per cent of the contents of the average company's filing cabinets can be immediately destroyed; only 10 per cent needs to be kept permanently. The rest must be kept for current operational needs but can be destroyed from time to time.

The average company has found that while records administration is not a top-management function, the nature of the problem is such that it is an over-all function and should not be more than one step removed from top management; the job is too big for the office manager, as such.

CURTiSS

. . . surrounds candy making with DRY air to combat Chicago's high humidities



From the presses, Curtiss Fruit Drops pass into long ovens, fed DRY air by a Lectrodryer.

Packaging is also done in DRY air.

DRY air—dried by a Lectrodryer—makes this department of Curtiss Candy Company independent of Chicago's humid weather. DRY air surrounds the machines making and packaging Fruit Drops, fills the long ovens where they're hardened.

Standing by during the winter, the Lectrodryer jumps into action on the first difficult drying day. For economy, about 30% of the air is recirculated from the tunnel driers. Air is held under slight pressure to prevent moist air from leaking in from adjoining rooms.

Is unwanted moisture present in your processes? There are Lectrodryers to solve your problem, whether it's DRYing air, gases or organic liquids. Tell your troubles to Pittsburgh Lectrodryer Corporation, 309 32nd Street, Pittsburgh 30, Pennsylvania.

In England: Birlec, Limited, Tyburn Road, Erdington, Birmingham.
In Australia: Birlec, Limited, 51 Parramatta Road, Glebe, Sydney.

LECTRODRYERS DRY
WITH ACTIVATED ALUMINAS

LECTRODRYER

REGISTERED TRADEMARK U. S. PAT. OFF.

The report is in two sections, one devoted to the general principles of records management, and the other to a detailed description of the various administrative techniques developed by the companies contributing their experience to the study. It is available at $7.50 a copy from The Dartnell Corporation, 4660 Ravenswood Avenue, Chicago 40, Illinois.

Material Handling

Lewis Shepard Products, Incorporated, Watertown, Massachusetts, makes a half ton hand operated fork lift truck which is recommended for stacking in restricted areas and especially in multistory buildings. The stacking device is telescopic and the forks can be hinged back over the truck, so that the unit will fit in a small elevator. This reminds me to warn you to look at the wheels in your pallet handling equipment because a number of the boys in multistory buildings are complaining that the small iron wheels so often used on such equipment are beating the hell out of concrete as well as wooden floors.

Do you know that it requires ony ten pounds pressure to move a ton of material when it is suspended from a trolley on an overhead track?

Surfamax

Using easy-to-read diagrams, tables and categorized data illustrated throughout, the Micro Metallic Corp. of Brooklyn, New York, manufacturers of Surfamax filters, has prepared an informative 8-page booklet on the advantages, uses, operation and manufacturing methods of SMX filters. A listing is given on the properties, water flow and air flow of these porous stainless steel filters, providing maximum filter surface in minimum volume. Types of filters and their arrangements for various requirements is covered, together with detailed engineering information on dimensions and specifications. Also dealt with are the advantages of Surfamax filters for large operations and the type of applications in which Gravitan filters are used. A valuable outline on how to select SMX or GTN filters is also included. In addition, the Micro Metallic Corp. has included a listing of the special features available for individual applications, and a detailed description of high pressure filters and SXM and GTN filters with filter aids. Copies of this helpful booklet are available upon request to MICRO METALLIC CORP., 193 Bradford Street, Brooklyn, New York.

Water Conditioner

A new bulletin, describing the new Cochrane Water Conditioner, which combines the advantages of both hot process and zeolite softening, is announced by Cochrane Corporation, Pihladelphia. The bulletin describes the Cochrane Hot Process Zeolite Water Conditioner, a two-stage softener in which the first stage is the hot process, using lime or Dolomitic lime, followed by the zeolite softener, which reduces the residual hardness to zero. Savings in capital investment, in chemicals, in floor space and head room needed, and in operating attention required are claimed, as well as lower alkalinity and better control of phosphate excess in the boilers.

New Literature

Lyon-Raymond Corporation's new Riding Type SpaceMaker Electric Tiering Truck is fully described in a 4-page, 2-color bulletin now being distributed by the manufacturer.

Three models are explained in this bulletin; the skid tiering model, pallet tiering model for single faced pallets and a pallet tiering model for double faced pallets.

This new tiering truck will tier 48″ x 48″ loads at right angles from a 6′ aisle. Action photographs illustrate this unique space saving feature and suggest many applications. The pallet models are designed to handle 2,000 lbs. at 24″ load center and the skid model will handle 2,000 lbs. and 4,000 lbs.

Complete specifications of all the various models are listed and discussed in detail, together with the descriptions of many proven applications.

Write to Lyon-Raymond Corporation, 14171 Madison Street, Greene, N. Y. and ask for SpaceMaker Bulletin No. 701.

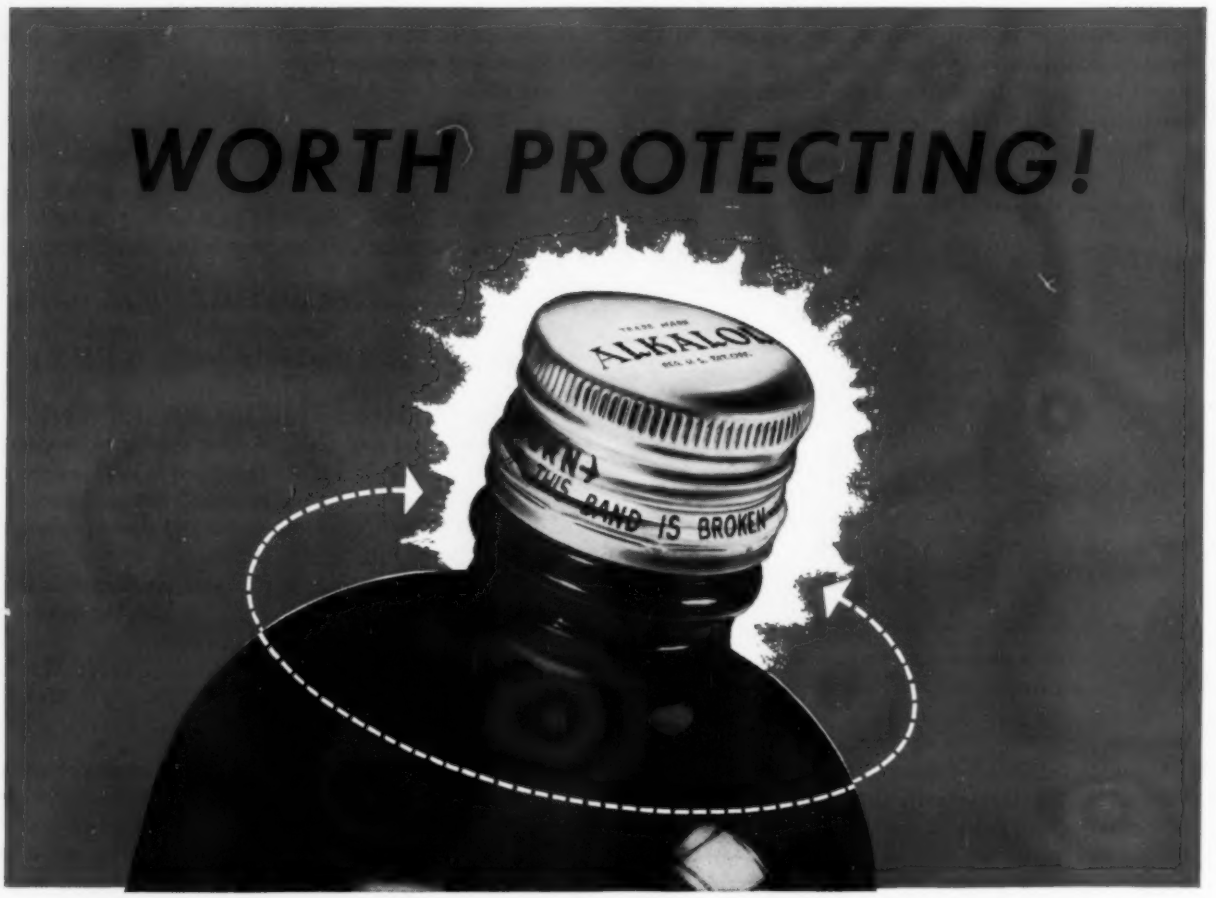
The following information is supplied by manufacturers of the equipment described and claims made below by these manufacturers are passed along for what they are worth. Presentation of such notice in this department is not to be taken as endorsement of the claims or of the equipment.

Mini Labeler

An attractive office model, motor-driven label paster is a new product of Potdevin Machine Co., 1285 38th Street, Brooklyn 18, New York. The "Mini-Labeler" is sturdily constructed of metal and finished in crackle-green to blend with any office furnishings. A great aid in stepping-up office efficiency wherever edge or over-all gluing is required. Any inexperienced operator can turn out ten times the work in one hour compared to hand labor. And there is no danger of the glue oozing at the edges because the machine is adjustable to apply the desired amount of adhesive to the work while the ungummed side remains perfectly clean. Interchangeable heads are designed for cold glue application of a ½ inch margin or over-all pasting of labels up to 4 inches wide and any length. Changeover from one head to the other is made in a few minutes. Cleaning time is at an absolute minimum because the paste reservior is quickly detachable. Both reservoir and coating roller are made of bronze to avoid any possibility of corrosion and to permit simple removal of paste when cleaning. The "Mini-Labeler" measures 8″ wide x 12″ long x 7½″ high. Light enough in weight to move to any convenient spot. Just plug in to 110 volt A.C. outlet and it is ready to operate.

Ceco Cartoner

Container Equipment Corporation, Newark 4, N. J. invites your investigation of their new low cost auto-



Leading drug manufacturers who are proud of their products . . . exercise every care possible, to be sure that each reaches the customer as packaged. Many have chosen our Pilfer-proof Closure to help protect this quality . . . the closure that features the slotted band which, when broken, cannot be replaced. The closure that immediately detects and discourages pilfering. We'd like to discuss packaging with you — to send you a copy of our free catalog containing information on our complete line of closures and sealing machines. Just write: ALUMINUM COMPANY OF AMERICA, 1702J Gulf Building, Pittsburgh 19, Pennsylvania.

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ALCOA
CLOSURES
FORMERLY SOLD AS ALSECO SEALS

matic cartoning machine. This unit is an extension of the famous Ceco sealers with which you are familiar. These cartoners are adjustable.

New Stainless Steel Self Priming Pump

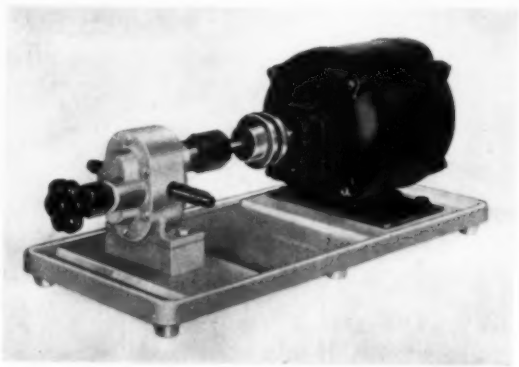
Ertel Engineering Corporation, Kingston, New York announces the manufacture of a new group of Stainless Steel self-priming Pumps as an addition to its Liquid Handling Equipment line.

The new units will be designated as Model ESP. They are available in five sizes, in the following gallons per minute at zero pounds pressure: 3 gpm., 5 gpm., 10 gpm., 20 gpm., and 30 gpm.

The design is extremely compact and insures perfect alignment of the minimum of moving parts. Pumping capacity is thus continuously maintained.

Handy manual by-pass control valves are included on each pump to easily regulate pressure and flow rate.

All sizes are available as individual units or as complete pump assemblies, direct drive or belt driven.



Uses: For pumping carrosive liquids, chemicals, drugs, cosmetics, foods, syrup, wines, whiskies, pharmaceuticals, vinegar, etc. Can be installed on all types of installations.

Recirculating Ovens for Drying Pharmaceuticals

A series of new recirculating ovens for drying pharmaceuticals and supplies has been added to its line by Arthur Colton Company of Detroit, the country's oldest builder of pharmaceutical machinery.

Two sizes are provided; Series 1030 holds 10 trays and Series 2030 holds 20 trays. Construction and operation are alike in each series. All trays are the same size, 30″ x 30″ x 1″.

The unit is built like a modern refrigerator and, therefore, provides comparable efficiency and economy in maintaining the desired inside temperature.

The cabinet consists of an outer and an inner steel shell mounted on a frame structure of stout angle iron and thoroughly insulated by means of a 2″ blanket of 5-lb. density rock wool.

A damper-controlled inlet permits measured air volume to be drawn in by means of a high-velocity, multi-blade fan and passed over a heating unit in the base of the cabinet. The heated air is then delivered to a plenum chamber whence it is forced through a series of full-width slots into the drying chamber and horizontally across the surface of each tray.

The intake and outlet ports, fully controlled by dampers from the outside, permit any indicated combination of fresh air intake and exhaust or recirculation of contained air. High velocity circulation provides efficient drying with minimum current consumption. All ovens are available for electric, gas, or steam heat.

All exterior edges are rounded for good appearance and both inner and outer shell are finished in gray enamel, the interior finish being baked on. The door is heavily insulated and closes against an insulating gasket by means of explosion safety latches approved by insurance underwriters.

The new Colton Drying Ovens, the new Colton Granulator, and the tableting machines and sugar coaters and polishers already in the company's line, provide the mechanical essential of a complete and compact tablet manufacturing plant under this old and well-known name.

Plastic Package

A new package of clear plastic has just been placed on the market by Domar Products, Incorporated, Cleveland, Ohio. At first glance, this container looks like the familiar water clear cannister of transparent sheeting. However, Domar containers are produced from extruded tubing, (not sheet) and suitable tin ends. They are equipped with friction fit, rather than conventional telescoping covers.

The manufacturer reports these to be the first plastic containers with metal top and bottom that are liquid tight. These cannisters can be used for products requiring refrigeration and are suitable for candies, edible nuts, spices, teas, etc.

Domar containers weigh approximately a fifth as much as glass, reducing shipping, handling and breakage costs. The toughness of the plastic is fully utilized due to its seamless construction. Domar containers can be filled on automatic equipment. The friction fit closures can be applied with conventional equipment.

Volume Packaging Checkweighing . .

Uniform consumer packages meet every requirement. Net weight in the package is accurate . . . overweight is eliminated and product recovered . . . underweight does not occur. You meet all weights and measures regulations everywhere. No matter what or how you package gear your checkweighing to your production line. Sound planning always avoids bottlenecks in advance. Do this with weighing equipment that fits the job. EXACT WEIGHT Scales are in daily use in thousands of plants that package for over-the-counter distribution, coast to coast . . . are designed and built for your particular needs for manually operated, semi-automatic or fully automatic operations. Write for details for your business.

Service by nation's foremost electronic service specialists!

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Nationwide service through the RCA Service Company, Inc.,* is yours when you buy the SELECTROL. The electronic experts of this specialized service organization supervise the initial setup and adjustment, also supply whatever subsequent service you need.

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TUBE FILLING AND CLOSING MACHINES

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to fill tubes and jars with Patented SELF-EXPANDING PISTON and TOTALLY ENCLOSED THREE-WAY-VALVE resulting in EXCEPTIONALLY HIGH ACCURACY NO AIR POCKETS IN CREAM

THE ONLY TUBE CLOSING MACHINE which performs THREE FOLDS with one revolution; two folds in one direction, one reverse. NEITHER CRIMPING NOR CLIPS REQUIRED.

Tube Filling and Tube Closing Machines come as separate models, hand- or power-driven, as well as combined as Automatic Tube Filling Measuring Closing Machine.—Available in many types and sizes to meet the needs of the smallest as well as largest packaging plants.

Inquire also about our:

—Precision Universal Filling Machines, for gravity, vacuum, pressure for bottles
—Straight Line Vacuum Filling Machines for bottles
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—Bottle Cleaning and Emptying Equipment
—Ampoule Filling Machines

PERL

MACHINE MFG. COMPANY

68 Jay Street **Brooklyn 1, N. Y.**

Ampoule Coder

A completely automatic labeler and coder for vials or ampules, weighing only 45 pounds, is now being manufactured by Potdevin Machine Co., 1285 38th Street, Brooklyn 18, New York. The machine was invented and developed by Francis C. Worth, who owns numerous patents on packaging equipment. This new labeler employs many developments that have been patented by Mr. Worth.

The machine labels and codes vials or ampules of one size with a model available for labeling 1, 2, 3, 5 and 10 cc. sizes. Before being offered to the general public, a battery of five labelers was installed in the production laboratory department of Lederle Laboratories in Pearl River, New York, a year ago. The machines performed brilliantly and are still working at top efficiency.

Production tests have shown that the labeler can label more in one hour than by hand operation in one day. One operator at the machine can label up to 46 vials per minute. The unit is small and compact, 26″ long, 20″ high, 10″ wide, with handles so that it can be

carried. It uses thermoplastic adhesive kept in the proper working state in a thermostatically controlled heater. Elimination of time lost in cleaning glue pots or parts exposed to glue is another outstanding feature of this new machine. All one has to do is to turn on the heat and in 6 to 8 minutes the labeler is ready for operation. Uncoated labels are held in a feeder accommodating several thousand labels. Vials or ampules are placed in a hopper and are automatically carried through the machine where the label is securely applied and coded. (Special attachments can be provided for label coding at the same moment the vial is labeled).

Construction of the labeler is as precise as a watch. Parts are made of chromium plated brass and duraluminum. All moving parts are of special design and require no lubrication. Its glistening exterior and small, clock-like mechanism presents a very attractive unit. For complete particulars write to the manufacturer.

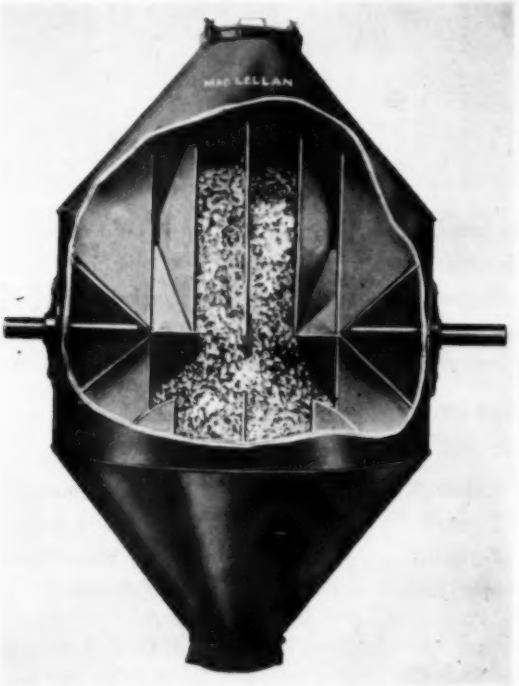
Eastern Pump Catalogs

Description of Eastern Centrifugal Pumps for industrial applications presented with the complete engineering data, diagrams, and suggestions. Over 100 close-coupled models are available to pump from 0 to 70 p.s.i., 0 to 70 g.p.m. These economical and trouble free centrifugal pumps are available in special metals. Bulletin 100.

Data, diagrams and engineering suggestions about Eastern Positive Pressure Vane and Gear Pumps. Eastern Positive Pressure Pumps are close-coupled and move non-lubricating liquids at high pressures; Vane Pumps to 60 p.s.i., Gear Pumps to 200 p.s.i. Eastern precision-manufactured pumps are famous for long life. Bulletin 200.

MacLellan Mixer

Mixes of the most exacting precision of any dry free-flowing materials are provided by the MacLellan mixer, now widely in use in leading industries and laboratories requiring such mixes. Particular mixes that ordinary processes cannot effect, such as extremely small percentages are easily fulfilled by the MacLellan. Uniform



blends are assured; and a perfect mix in a minute is a common record.

The simple construction of this sturdy unit is shown by the cutaway view. Materials charged into lower compartment are divided by wings. Rotation of drum carries materials above the axis until they fall by gravity discharging successively from pairs of pockets, pyramiding into the other end of drum. This operation is repeated every half revolution giving sixty complete separations and mixes in five revolutions.

The MacLellan takes any size mix—5 lbs. to a ton. Capacities 5 quarts to 160 cu. ft. It solves sampling, blending and mixing problems of chemists, biologists, engineers, laboratories, food and feed manufacturers, drug and cosmetic manufacturers, and scores of others.

An informative bulletin with illustrations, may be had by addressing the manufacturer, The Anglo American Mill Sales Co., Owensboro, Kentucky.

(Continued on page 427)

4 Advantages

the MIKRO hand of ECONOMY

SMOOTHER, ULTRA-FINE GRINDS

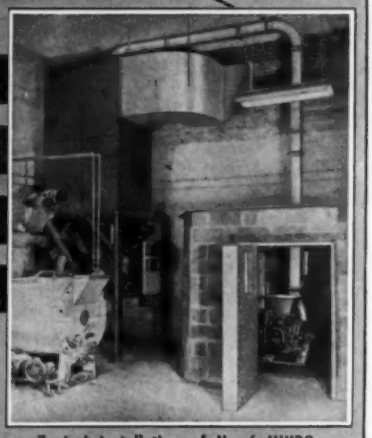
SAVINGS IN POWER

IMPROVED FINISHED PRODUCTS

LOWER INVESTMENT COSTS

with the

MIKRO-ATOMIZER

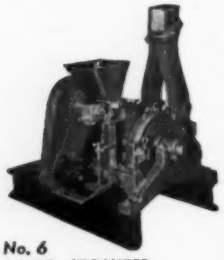


Typical installation of No. 6 MIKRO-ATOMIZER and MIKRO-COLLECTOR in large confectionery plant.

Because of its phenomenal ability to produce smooth, ultra-fine grinds and blendings at remarkably low temperatures, more and more economy-minded manufacturers are turning to the MIKRO-ATOMIZER as a means of improving their products and lowering production costs.

The MIKRO-ATOMIZER has proved a boon to many manufacturers, particularly in the fine grinding of:

Chemicals	Sugar	Sugar Mixtures
Dyestuffs	Cocoa	Food Mixtures
Pigments	Drugs	Synthetic Resins
Insecticides	Pharmaceuticals	Cosmetics



No. 6 MIKRO-ATOMIZER

The MIKRO-ATOMIZER has made possible grinding in the lower micron range without exorbitant production and equipment cost as compared with other available equipment. It is ideal for the ultra-fine grinding of certain insecticides for spraying operations.

SEND FOR—New Illustrated MIKRO Catalog

PULVERIZING MACHINERY COMPANY

229 Chatham Road Summit, New Jersey

MIKRO-PULVERIZER (FINE) -ATOMIZER (ULTRA FINE)

Reg. U. S. Pat. Off.

Also Makers of the MIKRO-COLLECTOR

PRESERVE OUR HERITAGE: FAITH, FREEDOM AND INCENTIVE

STRAIGHT-LINE VACUUM FILLER

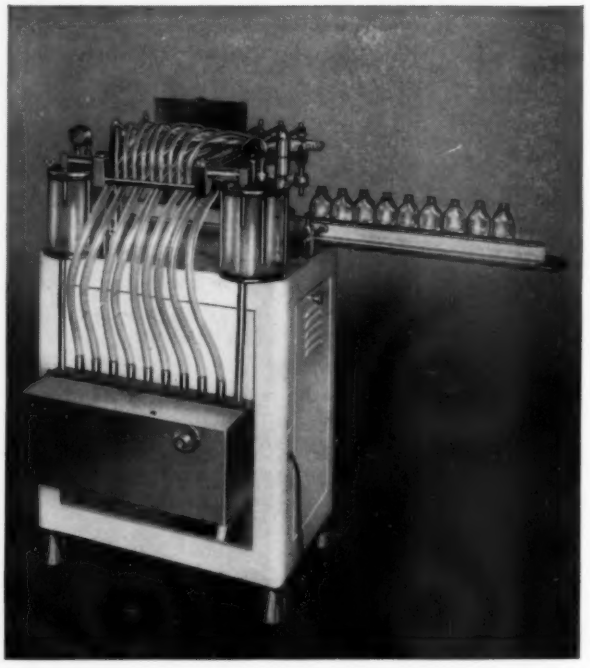


Photo of Rear view of the New Model B-49 Straight-Line Vacuum Filler showing set-up utilizing nine tubes for handling six-ounce containers

New Semi-Automatic Machine Introduces More Comprehensive Automatic Machine Operation!

A versatile machine for filling liquids and semi-liquids. Designed for quick, on-the-job changeover for any container up to gallon size and with efficient speeds on all size containers without undue pressure upon the operator.

Mechanical innovations introduce more comprehensive automatic machine operation for eliminating hand servicing. The product handling system is designed for quick clean-up after runs and the operating mechanism is simple and substantial for many years of enduring, uninterrupted filling service.

Seldom does a new machine, so quickly, make a place for itself in established filling set-ups either on steady production or as a versatile standby unit for peak loads. The Model B-49 Bulletin will give you the interesting details; write for it today.

U. S. BOTTLERS' MACHINERY COMPANY

4013 NORTH ROCKWELL ST. CHICAGO 18, ILLINOIS

OFFICES: Boston—Dallas—Houston—Denver—Los Angeles—New York—Phoenix—Portland—San Francisco—Seattle—Tampa—Montreal—Toronto—Vancouver—Winnipeg—New Orleans—Philadelphia

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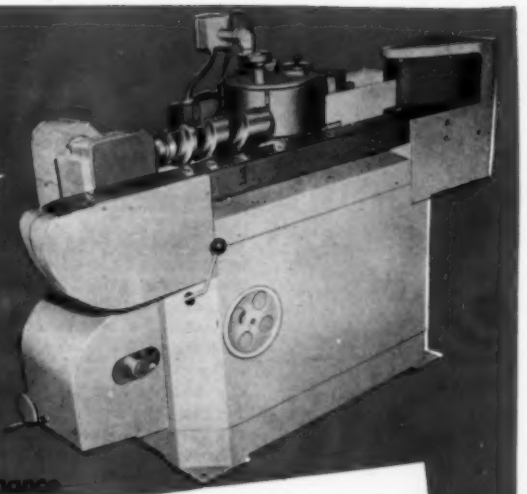
NO GLUE

NO CHANGE-PARTS

ECONOMY AT ANY SPEED

With amazing simplicity and low maintenance



You can forget EVERY labeling problem—

when you use a fully automatic

Label-DRI*

The headline tells the full story of this modern method of labeling on the *Label-DRI*.

Eliminating glue, you banish ALL the variable elements, all the frustrating delays inherent in the use of adhesives.

No change-parts means a sizeable saving in extra accessories, and eliminates down time.

Whether you use the *Label-DRI* for products produced at 300 per minute, or as little as 80 a minute, the ease of operation, the constant flow and exceptionally LOW maintenance makes it economically *sound*!

Ask about Label-DRI's 30 ADVANTAGES!

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Corporation
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Chicago, 325 W. Huron Street
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*Reg. U. S. Pat. Off. 903-2

The only labeling unit that eliminates change parts and provides full **8-hour volume during every 8-hour day**

no fussing with glue!

CUT PACKAGING TIME...

WITH THIS

FASTER BAGGER

The Anderson Bagger, Model 134, is designed to handle bagged products at a fast rate with a minimum of effort. Simple adjustments for height and tilting forward or backward enables the operator to set the machine at the most advantageous position. He can fill the bag and place it in the carton in one operation. The stainless steel bag trough, capacity 200 bags, may be loaded from front or back. Simple adjustments for bag sizes. Blower, equipped with air filter, opens bag and keeps it free from foreign matter.

Send Today for Bulletin No. 9-24

Anderson BROS. MFG. CO.

ANDERSON BROS. MFG. CO.
ROCKFORD, ILLINOIS

HERE'S HELP for your FILLING PROBLEM

LOW COST, FASTER FILLING

Designed for speed and accuracy, this HORM Portable Vacuum Bottle Filler will reduce production costs from the moment it is installed. Fills from drams to gallons—evenly, quickly, handling any free-flowing liquid. Fills CLEANLY with NO DRIPPING. No liquid goes through the pump.

For dependable, uniform performance install one or more of these time-saving, money-making units.

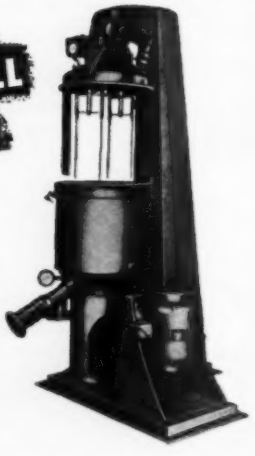
Write for Literature

F. R. HORMANN & CO., INC.
17 STONE ST. • NEWARK 4, N. J.

NORTHERN GLASS COMPANY, 118 Sacramento St., San Francisco, Cal.

Mix Paste Type Materials More Uniformly–Much Faster

with This New ABBÉ—DISPERSALL Paste Mixer



This triple action mixer for pastes and heavy materials employs a combination rotary scraper and agitator mechanism mounted in the cover and a radially ribbed mixing disc in the bottom of the container to disintegrate, disperse and scrape the material from the sides rapidly.

Experience shows that pastes ordinarily requiring a long cycle of slow mixing can be processed with a saving of 60 to 80 per cent in normal processing time. Provided with heavy cover and jacket, the Abbé Dispersall Paste Mixer is ideally suited for either pressure, vacuum or high temperature operation. Capacities ranging from 5½ to 330 gal. Write for details.

Write for Catalog No. 62

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THESE ARE THE FEATURES THAT MAKE

MeritSEAL AN OUTSTANDING CLOSURE

FOR FINE COSMETIC PACKAGES

HARD, SCRATCH-RESISTANT COATINGS

The color and beauty of Meritseal is long lasting. Coatings are hard and tough to resist scratching and scarring. They're lacquered or lithographed to meet individual requirements.

SIMPLE, EFFICIENT CONSTRUCTION

Meritseal is a fabricated closure. It consists of a metal shell, into which is inserted a suitable liner and a thread made from a strip of noncorrosive metal or aluminum. The thread is joined into a ring, holding the liner in position. Lower edge of the shell curves inward, locking the thread in place.

PATENTED THREAD DESIGN

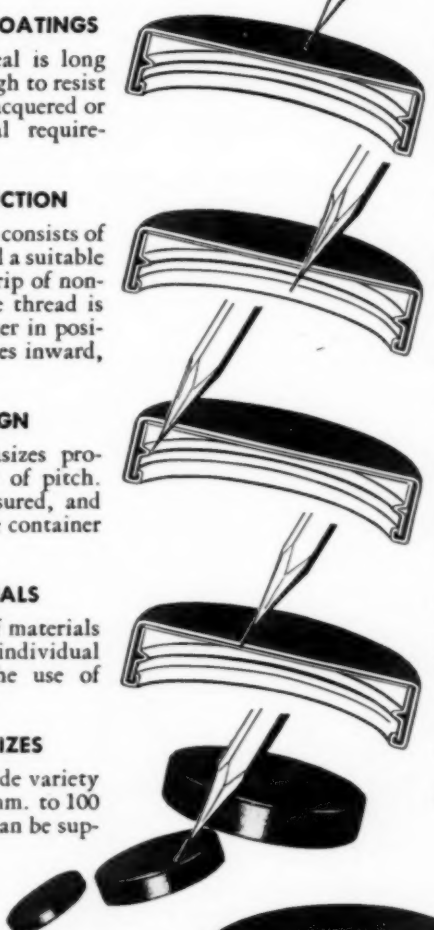
Meritseal's unique thread emphasizes pronounced contours and uniformity of pitch. Maximum sealing efficiency is assured, and any tendency of cap freezing to the container is eliminated.

CHOICE OF LINER MATERIALS

Liners are available in a variety of materials to meet the specific requirements of individual products. Inquiries concerning the use of special liners are always welcome.

WIDE RANGE OF STOCK SIZES

Meritseal closures are made in a wide variety of standard sizes ranging from 48 mm. to 100 mm. Larger sizes and special sizes can be supplied promptly on special order.



Yes, feature by feature, qualities have been built into Meritseal to make it the cap best suited to the requirements of manufacturers of quality cosmetics. Meritseal combines beauty, durability and economy, and its easy application means trouble-free application on the production line.

Why not let us send you complete information about Meritseal and samples to fit your own package? Be sure to mention the size of the caps and the color you prefer.

MeritSEAL—

CROWN CORK SPECIALTY CORP.
Division of
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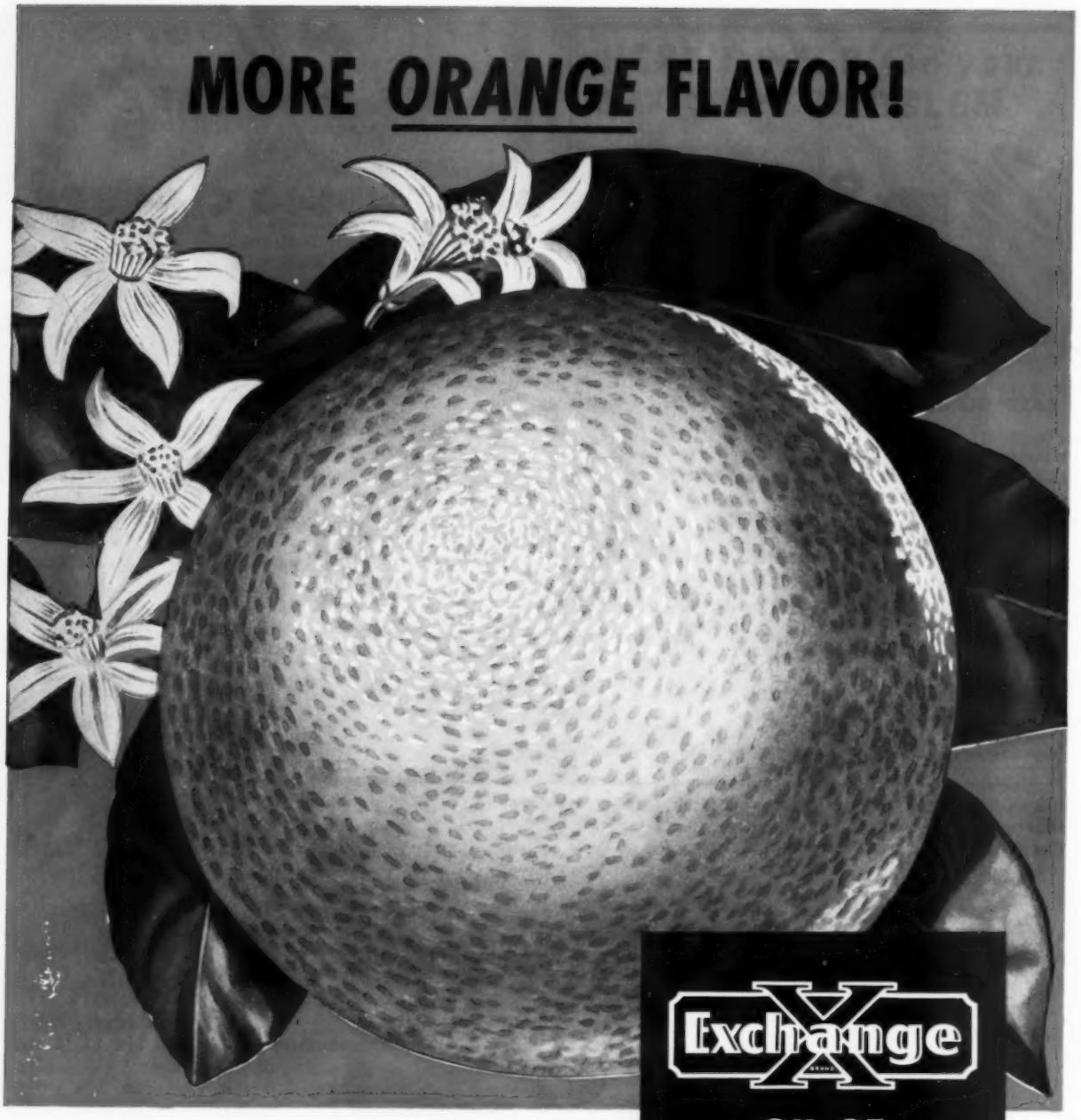

Flavor is the thing that makes your product stand out from others. And Exchange Oil of Orange *has* the flavor...that distinctive and preferred taste unique to oranges grown in the sunny, sheltered valleys of California.

Try Exchange Oil of Orange for yourself. Give it all your tests for *quality, uniformity* and *strength.* You'll like it...and you'll buy it!

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PATENT THOUGHTS AND TRENDS

*by Thomas Cifelli, Jr., Patent Attorney**

Introduction

This is a continuation of the review of U. S. patents dealing with dentifrices, begun in the June, 1950 issue of This Journal. In that issue all of the expired U. S. patents in Class 167, sub-class 93 were tabulated. Also, abstracts of a number of unexpired U. S. patents up to and including U. S. 2,042,359, issued May 26, 1936 were noted. The present article takes up where the June article left off, beginning with U. S. 2,052.694.

B. UNEXPIRED U. S. PATENTS
(cont'd. from June, 1950 issue)

U. S. 2,052,694—issued Sept. 1, 1936 to P. J. Breivogel and assigned to William R. Warner & Co.

Sodium lauryl sulphate is employed in tooth paste containing sodium perborate and liquid petrolatum. The claimed advantages are that the sodium lauryl sulphate is superior to soap or gum as a wetting agent, in that it will not precipitate from solution as readily as soap or gum, and does not have the same tendency to cause decomposition of the sodium perborate as a soap.

Claim 1 is typical:

A tooth paste consisting of a mixture of sodium perborate salt, a liquid petrolatum, a body supplying component, an emulsifying agent consisting of sodium lauryl sulphate, and alcohols of higher molecular weight.

U. S. 2,054,742—issued Sept. 15, 1938 to Eberhard Elbel, assigned to International Scientific Products Co.

This patent discloses the use of lather-forming wetting agents consisting of sulphuric acid esters of higher aliphatic alcohols or salts of these esters, specifically, sodium lauryl sulphate etc., in preparations for the teeth and mouth.

Very broad claim protection was obtained, claim 19 being typical:

A dentifrice containing a soluble salt of a sulfuric acid ester of a higher aliphatic alcohol.

U. S. 2,059,396—issued Nov. 3, 1936 to Jean Ripert, assigned to Gibbs & Cie.

Silicates having a hardness on Moh's scale between 2 and 3 are said to have a hardness sufficiently high for use in dentifrices but not so high as to cause detriment to the teeth. Micas such as Muscovite, Paragonite, Lepidolite, Zinnwaldite, Biotite and Phlogopite are specifically suggested.

Claim 1 gives an idea of the coverage:

A dentifrice preparation having as a polishing constituent finely powdered silicates constituting the natural micas in their natural lamellar crystalline form and having a hardness not greater than about 3.

U. S. 2,069,157—issued Jan. 26, 1937 to Melville Sahyun.

Basic and acidic sodium or potassium phosphates are suggested as preferred buffers in dentifrices. Amounts up to 3 per cent of the entire composition are sufficient, it being important that the saponaceous component of the dentifrice be not precipitated and that the emulsion be not broken by too much of the buffer.

Claim 1 gives an idea of the protection:

A composition of the character described comprising a soap, an abrasive in a finely divided state, glycerine and water, the mixture forming a pasty emulsion, and a buffer incorporated in said emulsion and including a basic component and an acidic component relatively proportioned to maintain a substantially constant pH value of alkalinity having a desirable physiological reaction while providing a reserve of ions for neutralization of the mouth juices, said basic component not exceeding about 1 to 2 per cent of the composition and said acidic component not exceeding ½ to 1 per cent of the composition to prevent the precipitation of the saponaceous component thereby.

U. S. 2,071,043—issued Feb. 16, 1937 to Ferdinand W. Nitardy, assigned to E. R. Squibb & Sons.

This patent discloses and claims the use in an oral preparation of sodium perborate and at least enough magnesium hydroxide to stabilize the sodium perborate. Two per cent of magnesium hydroxide is given as sufficient in an example.

Claim 1 follows:

In an oral preparation, sodium perborate and at least enough magnesium hydroxide to stabilize the sodium perborate.

U. S. 2,078,498—issued April 27, 1937 to Emil Klarmann and Louis W. Gates, assigned to Lehn & Fink Products Corp.

The use of tri-magnesium phosphate in dentifrices (25 per cent tooth paste and 82 per cent tooth powder) is disclosed.

Claim 1 follows:

A dentifrice containing a substantially water-insoluble hydrated tri-magnesium phosphate in finely divided form so as to act as a polishing and cleansing agent.

U. S. 2,089,529—issued Aug. 10, 1937 to George Behr.

In order to render acidic tooth paste anhydrous, hydrocarbons such as liquid paraffin are employed in place of hygroscopic substances such as glycerine. In order to eliminate stickiness resulting from the use of such hydrocarbons, an acid-resistant emulsifying agent such as saponine, albumin, tragacanth or other gums are added.

Claim 2 is typical:

Acidic tooth paste consisting of an anhydrous mixture of substances comprising a weakly acidic substance, a carbonate of an alkaline-earth-metal, an acid resisting emulsifying agent and an oil into which said acidic substance, said alkaline earth carbonate and said emulsifying agent are incorporated.

U. S. 2,089,531—issued Aug. 10, 1937 to Einar Bergve, assigned to A/S SiKo.

This patent proceeds on the basis that it has been definitely established by odontological science that a tooth paste should be free from soap and insoluble cleansing agents, because the soap is said to affect the gums and the insoluble cleansing agents remain in the pockets of the gums and may cause inflammation or increase the intensity of an existing inflammation.

To overcome such disadvantages the patentee suggests the use of magnesium salts of fruit acids.

Claim 2 gives an idea of the protection:

A dentifrice containing as a cleansing agent a magnesium salt of a fruit acid, said dentifrice having a pH value of between 6.3 and 7.8.

U. S. 2,089,845—issued Aug. 10, 1937 to Malcolm W. Atkins.

Atkins claims that unless a magnesium compound or salt is maintained in intimate contact with the teeth and gums for a period of several hours no substantial benefit results therefrom.

*Gaylor, Cifelli & Jurick, Newark, N. J.

Memo-
CERALAN
(LANOLIN ALCOHOLS)

A ceraceous mixture of monohydroxyl alcohols containing 28/32% free cholesterol split from pure lanolin.

★

★ **CERALAN** is produced by catalytic hydrolysis at low temperature to avoid degradation of heat-sensitive sterols and alcohols.

★ **CERALAN** facilitates incorporation of substantial quantities of free cholesterol in fat/oil mixtures at low temperatures and at the most economical cost.

★ **CERALAN** is an effective emollient, emulsifier and stabilizer for cosmetic emulsions —imparts textural smoothness and homogeneity to lipsticks, lotions and creams.

★ **CERALAN** is superior in color, odor, uniformity and general working characteristics to imported material—conforms with specifications for Alcoholia Lanae B.P.

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Photo of high vacuum distillation equipment at Mamaroneck plant.

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Accordingly, he concentrates the magnesium salt in a packing compound of semi-solid plastic character, this compound consisting for example of powdered magnesium carbonate in intimate mixture with a non-soluble semi-fluid binder, such as heavy mineral oil.

Claim 1 follows:

A protective ointment for the teeth comprising an alkaline substance for neutralizing the acidity of the mouth mixed with a substantially insoluble base or vehicle to form a plastic semi-solid mass, said ointment being adapted to remain in prolonged and intimate contact with the teeth when applied.

U. S. 2,090,437—issued Aug. 17, 1937 to Norman E. Woldman.

Sodium perborate is prepared in stable standardized form by incorporating it with oils such as neutral deodorized cotton seed oil, olive oil and peanut oil.

The claims protect the use of such stable standardized pasty mixtures of sodium perborate and highly refined edible oils of glycerid nature, free of moisture and readily dispersible in the mouth.

U. S. 2,094,671—issued Oct. 5, 1937 to Paul Poetschke.

The objectionable features of sodium perborate are overcome by incorporating it with mono-basic phosphates of alkaline earth metals, such as monocalcium phosphate.

Claim 1 is typical:

A composition suitable for use as a dentifrice including an alkali metal perborate and a monobasic phosphate of an alkaline earth metal.

U. S. 2,124,971—issued July 26, 1938 to Harry Eisenberg and Anthony J. Zolenas.

Liquid dentifrices having a specific gravity within a range of from 1.0 to 1.5 comprising neutral vegetable soap and certain alkane diols are disclosed.

The soap content varies from 5-15 per cent, 12 per cent being preferred.

Claim 1 gives an idea of the protection:

An essentially liquid dentifrice comprising a solution of a substantially neutral vegetable soap dissolved in a solvent selected from the group consisting of the propanediols, 1,2-butanediols, 1,3-butanediol, 2,3-butanediol, 1,4-butanediol, 1,2-ethanediol, and 2-methyl-1, 3-propanediol as the principal solvent for the soap.

U. S. 2,128,917—issued Sept. 6, 1938 to E. C. Crocker, assigned to Arthur D. Little Inc.

To avoid the practical disadvantages of using dry or wet sodium bicarbonate and at the same time to obtain the benefits of this material, Crocker produces a pasty mass with a saturated syrup as a vehicle. In order to prevent oozing of the paste a small quantity of a gel-forming agent is added. Soap in amounts from ¼-1 per cent of the whole composition is said to be suitable as a gel-forming material. If desired, synthetic detergents such as lauryl sodium sulphate can also be used to aid the solvent action on the mucin deposit.

Claim 1 gives an idea of the protection:

A tooth paste comprising sodium bicarbonate mixed with a sufficient quantity of substantially saturated sucrose syrup to give it a pasty consistency.

U. S. 2,130,034—issued Sept. 13, 1938 to Hans Schmidt, assigned to Winthrop Chemical Co.

In place of the usual mechanical cleansing agents the patentee here teaches the novel idea of using solid artificial resins in the form of powder.

Recommended resins are the condensation products of aldehydes and amines, for example urea-formaldehyde. Also, p h e n o l-aldehyde condensation products as well as polyvalent alcohols and carboxylic acid reaction products, among others are disclosed.

Very broad protection to the novel idea was obtained, as indicated by claim 1:

Tooth cleansing agent comprising as mechanical cleansing agent a solid artificial resin in the form of powder.

U. S. 2,151,495—issued March 21, 1939 to David V. Bender.

Disclosing solutions are those which when applied to the teeth render visible the mucin or bacterial plaques or deposits on the teeth which form stains. Inorganic iodin-containing compounds have been employed for the purpose, but are said to be objectionable as poisons and irritants.

Bender uses non-poisonous organic dyes or mixtures as the essential ingredients. Examples of such dyes include a q u e o u s solutions containing Guinea Green B and Rose Bengal.

While broader protection is given by some of the other claims, claim 7, which follows, gives a pretty good idea of the actual composition:

An aqueous disclosing solution for application to the teeth, containing the following ingredients in about the proportions specified by weight: Rose Bengal, 6 parts, Guinea Green B, 4 parts; glycerine, 15 parts; acetic acid, 1 part; water, 600 parts, the coloring ingredients being readily soluble in water and easily removed by water from an applicator used in applying the disclosing solution to the teeth.

U. S. 2,154,168—issued April 11, 1939 to Henry Klein and Emanuel Kaplan.

Another novel idea in dentifrices is the suggestion contained in this patent for making a completely edible and nutritious tooth food and tooth cleanser, having properties favoring its impaction in tooth crevices and whose decomposition by mouth organisms favors the production in the mouth of alkaline products.

Claim 1 throws light on the composition as well as the protection:

An edible dentifrice resistant to bacterial decomposition comprising an intimate admixture of substantial concentration of a salt containing calcium and phosphate radicals, and a nitrogenous adhesive carrier resulting from the treatment of a substance from the group consisting of casein, egg albumin, gelatin, yeast, blood protein, and vegetable meals with a non-toxic alkaline reagent, the said composition have a pH of approximately 7.0-10.0.

U. S. 2,172,743—issued Sept. 12, 1939 to Thomas I. Taylor.

Viscous liquid or semi-solid borates of polyhydric alcohols, such as the glycols and glycerine, are employed in connection with alkali metal and alkaline earth metal perborates to make tooth pastes. In order to increase the solubility of the perborate in water it may be activated by being maintained at an elevated temperature, for example at 90°C. for about 2 hours.

Claim 1 is typical:

A composition of matter comprising an intimate mixture of a perborate of an alkali metal and a water soluble viscous boric acid ester of a polyhydric alcohol selected from a group consisting of the glycols and glycerine that is substantially inert towards the said perborate.

U. S. 2,191,199—issued Feb. 20, 1940 to Ralph E. Hall, assigned to Hall Laboratories.

Abrasive detergent compositions useful in cleaning, scouring and polishing objects in general, for example, teeth, metallic objects or walls are disclosed.

The idea is to employ a material which is an abrasive but which also dissolves slowly in water solution so that the detergent employed in the composition can completely eliminate the abrasive. As examples of abrasives the patent discloses dicalcium phosphate, tricalcium phosphate, calcium carbonate, magnesium oxide, calcium metaphosphate or magnesium metaphosphate. As the detergents the patent discloses alkali-metal metaphosphates or tripolyphosphates or mixtures thereof. The preferred one is the soluble sodium hexametaphosphate sometimes called "Graham's salt."

Claim 1 gives an idea of the protection:

An abrasive detergent composition containing an alkali-metal salt of the group consisting of soluble metaphosphate and tripolyphosphate which is capable of sequestering calcium in a but slightly ionized condition, and an inorganic abrasive which is insoluble or only slightly soluble in water but which is soluble in water solutions of said alkali-metal salt.

(*Continued on page 424*)

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Synthetic Vitamin A Merck

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YOUR TRADE-MARK RECORD

by John H. Graham
International Patent and Trade-Mark Consultant

What Is a Name?

"A rose by any other name would smell as sweet."

There are no sixty-four good American dollars for the answer as to the author of those beautiful lines, but there is a query as to whether they are really true.

A rose is by nature a trade name. It says to all, beauty, appearance, perfume and above all remembrance. Most of us, with the smallest plot of ground, try to grow them.

We give them as something real to those we love. Orchids are for dress occasions, but for all sorts of Anniversaries, we have Roses. The name means a lot. We expect a lot. So it is with trade-marks or trade-names.

Would a Rose by some other name really smell as sweet? Is there an association between the name and the product? The answer is definitely YES!

Whether you buy Roses or grow Roses, you expect certain results—certain values. The name really means something.

That is what your trade-mark can mean. It can so associate your goods with quality, niceness, dependability and desirability that the buying public, to whom you must cater, will want them.

A *BASIC* trade-mark can place a supplier solidly before his trade.

Take Elizabeth Arden! Back in 1935, Miss Arden registered "Blue Grass" for all types of cosmetics. Today, whatever new trade-marks she may own, the one which really means "ARDEN" with all the background of sound values in toilet goods, cosmetics and perfumes, is "Blue Grass."

The buying public, which still consider the name of ARDEN as symbolic of quality in toilet goods, are in many ways remembering the success, the satisfaction of her earlier products.

From then to now is a good fifteen years—over a decade, but ARDEN'S name, amplified by new products, has advanced.

This is just one example of what we mean. THE BASIS OF A FINE BUSINESS POSITION. People will buy on a good name.

A trade-mark is one of the most important assets to anyone involved in the beauty field, be it cosmetics, soaps, hair goods, body massage or the like.

From the days of the Egyptians, the mode has been to improve women. The desire has been to make her prettier, more desirable, the epitome of femininity.

What is a name? Everything that means anything!

Miss Arden is only one person who has through the years, tried to help womanhood. There are many examples.

Examine a copy of the Trade-Mark Record, listing so many marks in the toilet goods, cosmetics, soaps and related fields. So many marks appear which can only prove the basic theory of this article, namely that the ROSE DOES have a definite meaning. That the ROSE by any other name might not smell quite so sweet or be such a good seller.

The ARDEN situation quoted is just one minor example of where a mark which has gained fame has in effect, carried its owner with it.

Think back! There are in the toilet goods and kindred fields, dozens of similar *BASIC* marks.

Trade-marks which of themselves, give to the owner and the buying public alike, something on which reliance can be placed for quality, value and service.

And what more can a trade-mark give than these three? Because every cosmetic ever sold and every perfume ever accepted and every soap ever demanded has had just these three attributes—quality—value—and service in supply.

So maybe the ROSE by some other name would smell as sweet—but—the ROSE, by its own name is just a ROSE—a flower of recognized perfume, beauty and desirability—to all.

The following Trade-Marks were recently published in the Official Gazette of the United States Patent Office.

A—Fil—51—S—581,916
Texas Pharmacal Co., San Antonio, Tex.
Ser. July 13, 1949 D. U. April 14, 1949

Arabesque—51—B—582,521
Daggett & Ramsdell Inc., Newark, N. J.
Ser. July 26, 1949 D. U. Jan. 1949

Bienaime—51—BC—547,157
S. A. Bienaime, assignor to Bienaime, Inc., N. Y., N. Y.
Ser. Jan. 15, 1948 D. U. April 18, 1935

Blue Gem—51—C—580,840
House of Lowell, Inc., Piqua, Ohio
Ser. June 21, 1949 D. U. June 16, 1949

Brisk—51—DH—565,517
The Armand Co., Des Moines, Iowa
Ser. July 10, 1948 D. U. Nov. 27, 1928

Buffies—51—E—582,791
R. Kirkpatrick, DBA Elise of Hollywood, Los Angeles, Calif.
Ser. Aug. 1, 1949 D. U. June 24, 1949

Cancel—51—D—565,598
Wright & Lawrence Labs., Inc., Chicago, Ill.
Ser. Sept. 21, 1948 D. U. Apr. 27, 1948

Citation—51—BCE—571,533
Howard S. Grove, Los Angeles, Cal.
Ser. Jan. 3, 1949 D. U. Oct. 20, 1948

Complexionette—52—A—578,134
Colgate-Palmolive Peet Co., Jersey City, N. J.
Ser. May 3, 1949 D. U. Mar. 10, 1949

Dermone—51—C—511,269
Elysee Cosmetic Mfg., Co., San Francisco, Cal.
Ser. Oct. 22, 1946 D. U. April 1941

Dur Mascot—51—H—577,046
(and des.) Dur Mascot Co., N. Y., N. Y.
Ser. April 13, 1949 D. U. Feb. 28, 1949

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Distributors of private brand cosmetics frequently plan to add a new product to their line with only one definite factor in mind—**the price.** It is the duty of a good cosmetic chemist to meet that price in formulating a product that will do the job. This requires a special combination of skill, experience, imagination and merchandising know-how.

For over 40 years, we have served leading American private brand manufacturers with the skill, experience and imagination that have brought their products outstanding sales success. We would enjoy working for your success if you have a product or price in mind.

Feel free to consult us immediately. There is no profit on a product in the mind.

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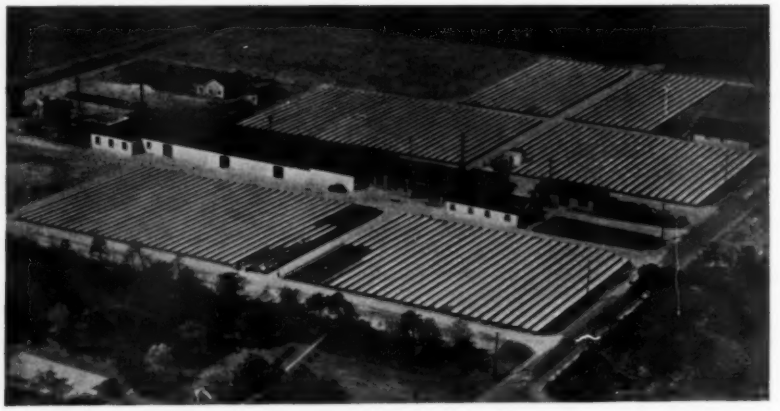

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Ebb—51—D—576,281
The Pharma-Craft Corp., N. Y., N. Y.
Ser. Mar. 29, 1949 D. U. Feb. 24, 1949

Enchanted evening—51—ABC—584,-115
Duke & Benedict, N. Y., N. Y.
Ser. Aug. 27, 1949 D. U. June 1, 1949

Ever Kurl—44—G—566,029
Eversharp, Inc., Chicago, Ill.
Ser. Sept. 28, 1948 D. U. Sept. 1, 1948

Flower Mart—51—B—578,148
Lehn & Fink Corp., Bloomfield, N. J.
Ser. May 3, 1949 D. U. Feb. 15, 1949

Frisky—51—BCDH—564,362
Wolff Freres, Inc., N. Y., N. Y.
Ser. Aug. 28, 1948 D. U. Aug. 17, 1948

Gardenia Sauvage—51—B—571,871
Parfums Ciro, Inc., N. Y., N. Y.
Ser. Jan. 8, 1949 D. U. June 6, 1928

Golden Beach—51—S—573,251
Kathryn, Inc., Chicago, Ill.
Ser. Feb. 3, 1949 D. U. Feb. 10, 1946

Greendream—51—H—576,372
Gertrude Williams, Detroit, Mich.
Ser. Mar. 30, 1949 D. U. Apr. 15, 1948

Hearsay—51—B—579,282
Lucien LeLong, Inc., Chicago, Ill.
Ser. May 21, 1949 D. U. May 5, 1949

House of Akabar—51—C—580,014
E. M. D' Aoust, Philadelphia, Pa.
Ser. June 6, 1949 D. U. May 10, 1949

In-Sta-Sol—VI—T—581,760
H. S. Brown, DBA In-Sta-Sol Co., Macon, Ga.
Ser. July 11, 1949 Ser. Feb. 1, 1938

Laineol—51—C—556,496
Undertakers Supply Co., Chicago, Ill.
Ser. May 7, 1948 D. U. Apr. 2, 1948

Life—51—BCKS—505,085
F. J. Trump, Stamford, Conn.
Ser. July 3, 1946 D. U. May 7, 1946

Liqui-Color—51—H—581,345
Noreen, Inc., Denver, Colo.
Ser. June 30, 1949 D. U. May 23, 1949

Mary Kent—51—C—528,146
Interstate Sales Co., Waco, Tex.
Ser. Mar. 21, 1946 D. U. July 15, 1945

Mixsan—51—B—580,369
L. V. Lebedeft, DBA Parfums de Leon, Los Angeles, Calif.
Ser. June 13, 1949 D. U. June 4, 1949

Nestle Lite—51—H—549,568
The Nestle-Le Mur Co., Meriden, Conn.
Ser. Feb. 12, 1948 D. U. Feb. 15, 1940

Presseen—51—H—569,855
Evelyn Jones, New Orleans, La.
Ser. Dec. 3, 1948 D. U. May 1, 1948

Red Dot—51—K—580,469
Dental Pharm. Corp. of America, Chicago, Ill.
Ser. June 15, 1949 D. U. Feb. 17, 1949

Repartee—51—B—575,533
Lentheric Inc., N. Y., N. Y.
Ser. March 16, 1949 D. U. March 8, 1949

"Round Trip"—51—C—579,986
Lucien LeLong, Inc., Chicago, Ill.
Ser. June 4, 1949 D. U. May 18, 1949

Rubicon—51—ABCEI—542,490
L. H. Thralls, DBA Hall, Thralls & Co., Hymera, Ind.
Ser. Nov. 26, 1947 D. U. Since 1924

S. A. Super Rich—51—C—559,689
Dermetics, Inc., N. Y., N. Y.
Ser. June 19, 1948 D. U. Jan. 19, 1948

Safe—51—BD—563,779
Duo Cosmetics, Inc., Los Angeles, Calif.
Ser. Aug. 20, 1948 D. U. Feb. 1946

Sallie's—52—H—526,725
Freda Batchelor, Hamtramck, Mich.
Ser. Feb. 15, 1949 D. U. Sept. 5, 1947

Secret Garden—51—B—578,036
Mann Chemical Labs., DBA Leo Mann & Co.
Ser. Apr. 30, 1949 D. U. 1940

Silikill—VI—T—580,538
Waxed Silicone Products Inc.
Ser. June 15, 1949 D. U. Aug 1, 1948

Silk-Tone—51—B—573,266
Helena Rubenstein, Inc., N. Y., N. Y.
Ser. Feb. 3, 1949 D. U. Aug. 30, 1948

Silken Look—51—C—572,927
Helena Rubinstein, Inc., N. Y., N. Y.
Ser. Jan. 27, 1949 D. U. Jan. 6, 1949

Silver Star—51—H—578,892 (And Des.)
M. R. Pope, Eagletown, Okla.
Ser. May 14, 1949 D. U. Jan. 10, 1949

Sinister—51—BCH—582,028
Consolidated Cosmetics, Chicago, Ill.
Ser. July 15, 1949 D. U. July 11, 1949

Sleek—51—D—578,251
Elizabeth Arden Sales Corp., N. Y., N. Y.
Ser. May 5, 1949 D. U. Mar. 1, 1940

Slightly Wicked—51—A—582,695
Paul D. Newton & Co., Inc., Newark, N. J.
Ser. July 29, 1949 D. U. July 9, 1949

Spirrittine—IV—D—552,888
Spirittine Chemical Co., Wilmington, N. C.
Ser. Mar. 24, 1948 D. U. Nov. 28, 1890

Spontaneo—51—HT—566,910
Vesper D. Brown, Birmingham, Ala.
Ser. Oct. 2, 1948 D. U. Since 1938

Spots-Off—52—A—494,377
F. M. Turnbull, Los Angeles, Calif.
Ser. Jan. 5, 1946 D. U. Nov. 3, 1920

Sprite—51—D—582,054
The Pharma-Craft Corp., N. Y., N. Y.
Ser. July 15, 1949 D. U. Apr. 4, 1949

49—51—B—573,527
Hattie Carnegie, Inc., N. Y., N. Y.
Ser. Feb. 9, 1949 D. U. Apr. 1, 1944

Sta-Same—51, 52—H—516,318
A. J. Shepherd, DBA Jerry's Mfg. Co., Memphis, Tenn.
Ser. Jan. 24, 1947 D. U. November 1930

Stirring—51—B—528,913
Eisenberg & Sons, Inc., Chicago, Ill.
Ser. July 19, 1947 D. U. Jan. 1, 1942

Style-Master—44—W—556,665
Standard Products Corp., Whitman, Mass.
Ser. May 10, 1948 D. U. April 23, 1948

Sulfo Dandrug—18—H—568,896
Dandrug Corp., Wilmington, Del.
Ser. Oct. 7, 1948 D. U. April 1, 1947

Sun Dance—51—C—574,846
Lehn & Fink Products Corp., Bloomfield, N. J.
Ser. Mar. 3, 1949 D. U. Jan. 3, 1949

Sun Valley Tan—51—C—567,365
The Armand Co., Des Moines, Iowa
Ser. Sept. 27, 1948 D. U. Sept. 1940

Tabac Noir—51—B—568,928
Caron Corp., N. Y., N. Y.
Ser. Nov. 17, 1948 D. U. Since 1948

Te-Anne—52—A—570,870
Nettie Rosenstein, Inc., N. Y., N. Y.
Ser. Dec. 20, 1948 D. U. June 17, 1948

Techni-Veil—51—C—551,992
Model's Cosmetics, Inc., Chicago, Ill.
Ser. March 15, 1948 D. U. Jan. 12, 1948

Temp—51—H—569,800
B & B Distributors, Broadalbin, N. Y.
Ser. Dec. 3, 1948 D. U. Aug. 6, 1948

The Royal Road To Loveliness—51—ABCD—562,927
Barbara Gould, Inc., N. Y., N. Y.
Ser. Dec. 23, 1949 D. U. Since 1937

Tiheras—VA—C—581,998
James C. Stineman, South Fork, Pa.
Ser. July 14, 1949 D. U. Apr. 8, 1949

Timeless—51—ACDH—559,691
Dermetics, Inc., N. Y., N. Y.
Ser. June 19, 1948 D. U. Aug. 20, 1947

Toquade—51—C—577,519
Coty, Inc., N. Y., N. Y.
Ser. Apr. 22, 1949 D. U. Mar. 21, 1949

"Touch of Genius"—51—CE—574,383
Revlon Products Corp., N. Y., N. Y.
Ser. Feb. 23, 1949 D. U. Jan. 20, 1949

Toupe—51—H—573,367
F. B. Erwin, DBA Toupe Labs., Deerfield, Ill.
Ser. Feb. 5, 1949 D. U. July 1, 1948

Tri-Mor—51—H—557,944
Mor-Hair, Inc., Brooklyn, N. Y.
Ser. May 27, 1948 D. U. Jan 17, 1948

Trivex "T"—VI—T—548,891
Food Machinery & Chemical Corp., N. Y., N. Y.
Ser. Feb. 5, 1948 D. U. Jan. 13, 1948

Trois Valses—L51—BC—571,362
S. A. Parfums Forvil & Dentifrices du Docteur Reunis, Seine, France
Ser. Dec. 30, 1948 D. U. Sept. 17, 1937

Tu'Be—44—AGHW—561,668
Harold's Home Permanent, Inc., Chicago, Ill.
Ser. July 19, 1948 D. U. July 15, 1948

Tumble Suds—52—A—572,299
Essential Chemical Co., Assignor to Economics Lab., Inc., St. Paul, Minn.
Ser. Jan. 17, 1949 D. U. Jan. 7, 1949

Tundra—51—B—569,868
Les Parfums de Dana, Inc., N. Y., N. Y.
Ser. Dec. 3, 1948 D. U. Nov. 1, 1948

Twixtoes—44—R—561,733
Dorsay Products, N. Y., N. Y.
Ser. July 20, 1948 D. U. April 26, 1946

Valentines—51—B—537,518
(and des.) Valentines, Bridgeport, Conn.
Ser. Oct. 10, 1947 D. U. Oct. 6, 1947

Video—22—R—577,247
American Safety Razor Corp., Brooklyn, N. Y.
Ser. Apr. 16, 1949 D. U. Mar. 21, 1949

Videomatic—51—C—575,976
J. Del Russo, Inc., N. Y., N. Y.
Ser. Mar. 24, 1949 D. U. Mar. 18, 1949

Waldorf—51—A—561,821
General Products, Chicago, Ill.
Ser. July 21, 1948 D. U. Nov. 1940

Warning—51—BCH—562,801
Parfums Charbert, Inc., N. Y., N. Y.
Ser. Aug. 4, 1948 D. U. July 29, 1948

Waukeazy—18—T—576,464
Manhattan Drug Co., Brooklyn, N. Y.
Ser. April 1, 1949 D. U. Feb. 1896

Wyandotte—52—A—560,150 (And Des.)
Wyandotte Chemicals Corp., Wyandotte, Mich.
Ser. June 24, 1948 D. U. May 13, 1899

Youth Again—51—C—573,015
Valgarde, Inc., N. Y., N. Y.
Ser. Jan. 28, 1949 D. U. Mar. 15, 1948

Zest—51—CHK—577,557
Proctor & Gamble Co., Cinninnati, Ohio
Ser. Apr. 20, 1949 D. U. Nov. 24, 1948

Act of 1946

The following Trade-Marks have been recently republished under the terms of the above (Lanham Act). No opposition can be filed against them but they are all subject to cancellation proceedings.

Blue Grass—52—A—321,146
Reg. Jan. 22, 1935 To Elizabeth Arden, Inc
Repub. by Elizabeth Arden Sales Corp., N. Y., N. Y.

Blue Grass—51—B—321,593
Reg. Feb. 5, 1935 To Elizabeth Arden, Inc.
Repub. by Elizabeth Arden Sales Corp., N. Y., N. Y.

"Dentocillin"—18—K—438,705
Reg. May 11, 1948 To Marlo Lab., Inc.
Repub. by The Andrew Jergens Co., Cinn., Ohio

Djer-Kiss—51—BCHI—148,740
Reg. Nov. 22, 1921 to A. H. Smith Co.
Repub. by The Nestle LeMur Co., N. Y., N. Y.

Empress—51—G—328,629
Reg. Oct. 1, 1935 To National Mineral Co.
Repub. by Helene Curtis Industries, Inc., Chicago, Ill.

42—51—ACGHI—398,161
Reg. Oct. 13, 1942 to 42 Products, Inc.,
Repub. by 42 Products, Ltd., Los Angeles, Cal.

COMPOUNDER'S CORNER

Titanium Dioxide in Cosmetics

In a discussion (*Soap, Perf. & Cosmetics* 23:589, 1950) of the value of titanium dioxide in soaps and cosmetics, it is noted that this material is chemically and physiologically inert and may be included in such products without fear of reaction or toxicity. It is for all practical purposes neutral and insoluble in water, and is dead white. Its utility lies in its inertness, and in its possessing over five times the covering powder of zinc oxide, the substance which it is to a considerable extent replacing.

The whiteness, covering power, and non-irritant qualities of titanium dioxide make it an obvious ingredient in the formulation of face powders, cake make-up and powder creams. It is also very mildly abrasive, and has therefore been suggested for use in acid dentifrices where calcium carbonate cannot be used, and also, of course, in nail polishing preparations. It has a specific gravity of about 3.9, so is considerably lighter than zinc oxide, whose specific gravity is 5.6. This is an added advantage in face powder production. It is pointed out that early formulas containing titanium dioxide usually erred in including too high a proportion of this material. Actually it gives most satisfactory results at 5 per cent or below; a greater amount tends to produce a "chalked" appearance. The following is a formula for a medium heavy powder base, which indicates its use:

Titanium dioxide	4 per cent
Magnesium stearate	5 " "
Magnesium carbonate	8 " "
Talc, 200 mesh	25 " "
Starch (rice)	25 " "
Precipitated chalk	33 " "

If soluble colors are employed, they should not be introduced via the titania, as this does not tint evenly without a certain amount of difficulty. The modern powder dressing machine with a color spray obviates all difficulties. In any case, the chalk is usually chosen as vehicle when a suitable machine is not available.

Because the ideal powder cream has adequate covering power with a minimum solids content, titanium dioxide is a suitable ingredient of such products, as in the following:

Vanishing cream base	80 parts
Titanium dioxide	5 "
Talc	12 "
Pigment and perfume	Sufficient

In ordinary vanishing cream 0.5 to 1 per cent of titanium dioxide may be included, if desired, to increase whiteness and opacity. In this ratio, it also assists in producing a matte effect on the skin.

The compound is a useful ingredient of liquid powders which still retain a measure of popularity, and are especially suitable for application to the arms. Illustrative is a preparation containing:

Colloidal kaolin	7 parts
Titanium dioxide	5 "
Bentonite	5 "
Water	78 "
Glycerine	5 "
Pigment or color	Sufficient

The bentonite should be moistened with alcohol and some of the water added to produce a suspension. This should be settled for one hour, and decanted to eliminate the gritty particles that bentonite usually contains. A thin smooth cream of remarkable stability is formed if this product is passed through a colloid mill or homogenizer.

Titanium dioxide is also useful (1.5 to 4 per cent) in pigmented emulsions based on ammonium stearate or triethanolamine stearate. It enters, also into the formulation of modern Wet Whites and other theatrical, cinematic and television cosmetics. Modern cake make-ups in flat cake or stick form may also contain titanium dioxide as a perfectly stable, non-reactive white pigment.

Topical Dental Anesthetic

Many dental patients are fearful of the lancinating pain caused by the insertion of the hypodermic needle in order to produce local anesthesic. To overcome this fear, painless insertion of the needle can be accomplished through the application of the following topical anesthetic as developed by H. Brody (*Oral Hygeine* 40:497, 1950).

Benzocaine	120 grs.
Benzyl alcohol	10 cc.
Methyl salicylate	20 cc.

Dissolve the benzocaine in the benzyl alcohol and add the methyl salicylate. Preserve the solution in a well-stoppered, amber-colored bottle in a cool place and protected from light. To use this solution the mucosa at the site of the proposed injection is dried with a small sterile sponge and the solution is applied (not rubbed) for half a minute with a pledget of cotton. Said to be nontoxic, nonescharotic and nonirritating, this topical anesthetic is also effective for rapidly anesthetizing the oval mucosa during other dental procedures.

Cold Wave Data

In an editorial summary of published information concerning cold permanent waving preparations, appearing in *Soap, Perfumery and Cosmetics* (23:507, 1950) it is noted that poorly made "cold waving" preparations can easily do far more harm than good. The patent situation is also a rather delicate one. By way of general information, the review supplies the following very approximate formulas for the two solutions generally necessary for this type of permanent waving:

1. Ammonia solution (concentrated)	5 parts
Ammonium thioglycollate	10 "
Ammonium sulphite	10 "
Diethylene glycol	1 part
Water, to make	100 parts

The hair to be treated subsequently with:

2. Tartaric acid	3 Gm.
Hydrogen peroxide (20 vols.)	47 cc.
Water	50 cc.

It is stressed that these formulas are undeveloped and are based on comparisons of the patent literature and other published information.

Sulfated Alcohols in Shampoos

In discussing the use of sulfated alcohols in shampoos, A. R. Keast (*Perf. & Essent. Oil Rec.* 41:89, 1950) notes that products based on these detergents are available in the form of powders, liquids and creams or pastes. From the manufacturer's standpoint the powders offer the advantage of a cheap pack, since a paper envelope is all that is necessary. They are usually formulated on the basis of sodium lauryl sulfate and since the quantity of this material required for one shampoo is only about ⅛ ounce, it is usually bulked with some harmless inert diluent to a total weight of ½ ounce. Anhydrous sodium sulfate, magnesium sulfate or borax are commonly used as diluents.

Liquid preparations, however, are far more convenient and far more popular. Although it is readily soluble in warm water, sodium lauryl sulfate has a true solubility in cold water of only about 2 per cent and is not, therefore, suitable for the preparation of concentrated liquids. The triethanolamine salt, however, is very much more soluble and is supplied commercially as a viscous liquid. Keast also points out that unlike sodium lauryl sulfate, the sodium salt of the sulfated secondary fatty alcohols is readily soluble in cold water and a solution sufficiently concentrated for a liquid shampoo can be obtained. Perfume and coloring matter are sometimes added and a preservative is advisable because the solutions are generally neutral in reaction and will permit the growth of molds. Water-softening materials such as sodium *hexa*metaphosphate, may be added to enhance foaming power, and sometimes fats and oils or a small proportion of lanolin may be incorporated to give a reconditioning effect. This requires great care and skill in formulation if the liquid is to remain clear and bright. Some manufacturers have avoided this problem by adopting a milky solution as the standard, and one well-known shampoo consists of an attractive opaque golden fluid of the consistency of cream.

He notes that in recent years there has been an increasing demand for shampoos in the form of creams or pastes. This popularity is due partly to the fact that they are convenient to apply and can easily be massaged into the scalp. Another reason for their popularity is that there is less tendency to waste, for they cannot be spilled and will remain in the hair instead of running down the neck. Creams are readily formulated from the sodium salt of the sulfated alcohols which can be supplied in the form of a paste. Owing to the rapid increase in the solubility of this paste as the temperature rises, it is usual to incorporate some stabilizing agent such as gum tragacanth or one of the more modern mucilages based on methyl cellulose or sodium alginate. Waxy emulsifying agents such as Emulsifying Wax B.P. or stearic acid may be used, but only in very small proportions, because anything of a fatty nature tends to reduce the foaming power. As a rule the paste is diluted with water, or perhaps glycerine before being stiffened again by the addition of the mucilage.

The incorporation of a variety of special ingredients including fats and oils is readily possible in a cream shampoo, subject only to the maintenance of its foaming power. In some this is deliberately sacrificed in part so that an appreciable reconditioning effect may be achieved.

Sensitization to Polyethylene Glycols

Because of their valuable properties and low order of toxicity, the polyethylene glycols (Carbowaxes) have been widely used in ointment bases into which various medicaments have been incorporated, both proprietary ointments for use on the skin and individually compounded prescriptions. They have been used as detergents, in cosmetic preparations, sun tan creams, hand lotions and shaving creams. Because of such extensive use, M. J. Strauss (*Arch. Dermat. & Syph.* 61:420, 1950) feels that it is important to call attention to the fact that sensitization to these compounds can occur. Details on two cases of sensitization are given in his report. Both patients showed sensitivity to the entire range of the polyethylene glycols in ordinary use, and it is suggested that the degree of sensitization may vary directly with the molecular weight of these compounds.

The fact that two patients have been found to be sensitive to the polyethylene glycols, says Strauss, does not necessarily detract from the usefulness of these materials. Other materials used in ointment bases have caused sensitization in a few persons. These materials make agreeable and useful ointment bases and in the vast majority of cases cause no difficulty. In addition, sensitization to these compounds represents no serious hazard. If it is recognized, use of these materials in the sensitized persons can easily be avoided since it seems unlikely that these compounds will ever be administered by any other route.

Hair Bleaches

A great many women, says E. Bemfield (*Retail Chem.* 21:55, April, 1950) are in the habit of bleaching their hair or of having it done for them. Hydrogen peroxide is the most commonly used bleaching agent. To this is added ammonia (.880) to speed the action, and sometimes a little soap to thicken the mixture. 20 volume peroxide is the strength normally used, and to use it stronger can be dangerous because of making a tender scalp sore. The amount of ammonia used must be controlled for the same reason. A good average ratio is 20 parts of peroxide to one part of ammonia. Many proprietary bleaches are sold to the public, some stronger than others, and mostly very efficient. In the main they are based on the same chemicals.

It must be realized, notes Bemfield, that bleaching does not tend to improve the texture of the hair, and care should be taken in its use. Sometimes the women themselves use too strong mixtures on their hair, and this can result in considerable breakage of the hair. The most important point to be stressed is that repeated applications of decoloring chemicals cause the trouble, and as the new dark hair grows through at the roots, subsequent applications must be confined to this new growth. The continual overlapping of the bleaching mixture each time invariably leads to the condition known as overbleached hair.

Choline Chloride Syrup

Growing interest in the lipotropic effects of choline chloride and its possibilities as an adjunct in the treatment of fatty infiltration of the liver is manifest in demands for palatable preparations containing this compound. This demand is met by the choline syrup described in Bulletin No. 5 of the Bureau of Professional Relations of the Florida College of Pharmacy, as follows:

Choline chloride	**7.50 Gm.**
Sodium benzoate	**0.03 Gm.**
Citric acid	**0.20 Gm.**
Amaranth	**to color**
Syrup of raspberry, to make	**30.00 cc.**

Each teaspoonful (5 cc.) of this syrup is equivalent to 1.25 Gm. of choline chloride.

PERFUMER'S SHELF

Aluminum Stearate as an Essential Oil Thickener

Noting that aluminum stearate is used in industry as a thickener for oils, J. Rae (*Manuf. Chem* 21:205, 1950) thought it would be of interest to determine the value of this stearate as a thickener for essential oils. In one experiment, 10 per cent of aluminium stearate was added to eucalyptus oil and the mixture heated with constant stirring. At 75°C. a thick gel was formed, which after 24 hours had a melting point of 50°C. After standing in a closed glass jar for one month no separation of oil has taken place. This experiment was repeated using eau-de-cologne oils in place of eucalyptus. This gave a rigid gel which has remained stable for several weeks. In certain pharmaceutical and cosmetic products essential oils are added to soft paraffin, and to increase the melting point and harden the consistency white wax, paraffin wax or cetaceum is frequently added. To ascertain whether aluminium stearate could be used to replace wax, and the like, the following were made, the melting point being taken after standing for 24 hours.

Eucalyptus oil	20
Soft paraffin to	100
Melting point 40°C.	
Eucalyptus oil	20
Aluminium stearate	2
Soft paraffin to	100
Melting point 46°C.	
Eucalyptus oil	30
Soft paraffin to	100
Melting point 36°C.	
Eucalyptus oil	30
Aluminium stearate	2
Soft paraffin to	100
Melting point 46°C.	
Eucalyptus oil	50
Soft paraffin to	100
Melting point 28°C.	
Eucalyptus oil	50
Aluminium stearate	5
Soft paraffin to	100
Melting point 50°C.	

Rae found that the three samples containing aluminium stearate melted readily when rubbed on the skin and were much smoother than is usual when white wax or other hardening agents are used.

Masking Cosmetic Ingredient Odors

The need for masking the odor of certain cosmetic ingredients is considered by T. Ruemele in the *Perfumery and Essential Oil Record* (41:42, 1950). This problem is particularly important with certain types of cosmetics, such as medicated preparations (soaps and creams), hair cosmetics (tonics, shampoos, brilliantines, wave-set preparations), manicure preparations (lacquers, bleaches, cuticle removers), beauty products (lipsticks, lotions, creams), and others.

Considering specific ingredients, he cites lanolin, which he describes as an excellent and efficacious emollient, possessing factors of physiological importance and representing a valuable constituent of lipsticks and beauty preparations (lotions, creams), yet bearing a very distinctive and not too pleasant fatty odor. This defect tends to limit its value, and impairs the quality of the final product if masking of the odor is not effectively carried out. Generally, floral bouquets (e.g. roses), with a modern finish as a result of incorporating a fruity note (e.g. pseudo-aldehydes), provide an excellent example with which to solve this problem satisfactorily both in regard to the fragrance and the flavor of lipsticks. Flower and balsamic perfumes used in conjunction with lily bases (terpineol, hydroxycitronellal) and benzyl acetate, a substance suggestive of jasmine flowers, would give similarly good results in beauty lotions and creams.

Isopropyl alcohol is also important because it is used in eau de Cologne formulae, hair tonics, wave-set lotions, and manicure preparations. This solvent has an acetone-like odor which becomes enhanced when water is present. But it should be pointed out that isopropyl alcohol alters the fragrance of the perfumes; thus, orange and bloomy scents become disagreeably sweet, and floral and light perfumes lose their odor almost completely. Spicy and rather harsh scents, however, appear unaffected, and tolerate the presence of isopropyl alcohol very well. In order to mask the odor of isopropyl alcohol much more of the perfume base must be employed, although some saving might be effected when masking is effected by synthetics such as terpineol (lilac odor), ionones (violet odor), amyl acetate (banana or pear drop odor), ethyl butyrate (pineapple odor), benzaldehyde (almond odor).

Incidentally, the smell of acetone and amyl acetate (nail lacquers) can be covered with lavender oil, sandalwood oil, bergamot oil or rose oil (individually or in combination). The ingredients of nail bleaches are preferably perfumed with phenylacetic acid, which has a honey odor. Cuticle removers need terpineol or terpeneless bergamot oil.

Thymol, benzoin, witch-hazel, when employed in creams for specific purposes, need the lilac or lily perfume type of masking ingredient. Detergents, as used, for instance, in liquid shampoos, might conveniently be covered with a lily base (e.g. hydroxycitronella) preferably, but not necessarily, backed by a flowery balsamic scent (e.g., ester of amino-benzoic acid, terpineol, etc.). The rose type odor is suitable where alkaline sulphides (depilatories) are concerned, but, as matter of fact, there is no objection in using violet scents (ionones) or another flowery note (e.g. methyl tolyl ketone). Similarly, the fresh hay or woodruff smell of coumarin or even a fruity effect (e.g. *beta* naphthol ethyl ether) might be well worth consideration. Covering power and persistence of the fragrance in face powders in which earthy pigments are used, are given by sandalwood, patchouli, vetivert, bois de rose, artificial musk, benzoin, styrax, and others.

Ruemele also points out that fougere scents are very useful for masking purposes, and particularly rather pungent odors can be both neutralized and olfactorily improved as a result of the really skillful combination of a woody and a floral fragrance appreciably deepened by the inference of a fruity note.

Color Reactions of Vanillin

In discussing some color reactions of vainllin, V. Zanotti and A. Zanotti (*Boll. chim. farm.* 88:252, 1949) report that treatment of the alcoholic solution

with pyrogallol and hydrochloric acid gives a rose-red color that is changeable and unstable. Treatment with 2-naphthol and hydrochloric acid causes a white precipitate that dissolves on heating, with a color that passes from green to blue, yellow, red and orange.

Punjab Citrus Oils

An analysis of the essential oils of sweet orange, bitter orange and grapefruit from the Punjab region has been made by B. K. Dutt and S. Prakash (*Indian Soap J.* 15:77, 1949). They found that the sweet orange oil had the following properties:

Specific gravity	**0.8530**
Refractive index	**1.4744**
Opitical rotation	**112°**
Acidity	**0**
Saponification value	**4.2**
Saponification value after acetylation	**7.36**

The sweet orange oil was found to contain δ-limonene 95 per cent, methyl anthranilate 1.2 per cent, linalool 0.31 per cent, crystalline wax 0.29 per cent, non-crystalline wax 0.68 per cent, and a crystalline coumarin derivative 0.42 per cent.

The characteristics of the bitter orange oil were as follows:

Specific gravity	**0.8498**
Refractive index	**1.4773**
Optical rotation	**96°**
Acidity	**0**
Saponification value	**2.2**
Saponification value, after acetylation	**7.7**

This oil contained 93.3 per cent δ-limonene, 1.22 per cent methyl anthranilate, a trace of linalool, 0.23 per cent. crystalline wax, 1.9 per cent non-crystalline wax and 0.95 per cent of the same crystalline coumarin derivative.

The grapefruit oil had the properties listed below:

Specific gravity	**0.8519**
Refractive index	**1.4781**
Optical rotation	**111.30**
Acidity	**0**
Saponification value	**6.3**
Saponification value, after acetylation	**14.7**

The oil contained 92.72 per cent δ-limonene, 0.64 per cent methyl anthranilate, 0.9 per cent. linalool, 0.53 per cent of a crystalline wax, 2.05 per cent of a non-crystalline wax, and 1.06 per cent of the same crystalline coumarin compound.

Vanillin from Eugenol

Although several patents claim the production of vanillin by isomerization of eugenol in aniline and oxidation of the isoeugenol with nitrobenzene, E. Mayer (*Osterr. Chem.-Ztg.* 50:40, 1949. through *Chem. Abstr.* 44:1451, 1950) points out that the yields are very low. He recommends the following improved procedure: 164 Gm. of eugenol, 85 Gm. of potassium hydroxide and 90 Gm. of water are distilled until the liquid temperature is 120 to 125°C., 820 cc. of preheated aniline is then added and distillation is continued to 180° until dry aniline comes over. The residual dark solution is autoclaved at 222 to 225°C. and 1.5 atmospheres for 15 minutes, cooled to 160°, mixed with 190cc. of 50 per cent aqueous sodium hydroxide and stirred at 108 to 109° with 490 cc. of nitrobenzene previously warmed to 100°C. The temperature is not allowed to go over 125 to 130° during the six-hour reaction. The mixture is steam-distilled for 16 to 18 hours, cooled, acidified with 50 per cent sulfuric acid and the vanilla is extracted with benzene and is extracted thence with aqueous sodium bisulfite and purified as usual. The yield is from 80 to 92 per cent.

Water-Soluble Aromatic Plant Extracts

Methods for making plant extracts that are completely soluble in water are given in Swiss patent 262,262, granted to Germinal S. A. In general, the volatile components of the materials being treated are separated as one fraction and the nonvolatile components soluble in water are obtained as an aqueous solution. This last is concentrated and reunited with a part of the previously separated volatile aromatic components.

In an illustrative example, 5 kg. of fresh peppermint leaves are treated by cohobation. After separation of the essential oil, the leaves are subjected to extraction until all the soluble components are extracted, to give two to four liters. This is filtered, centrifuged, and concentrated on a water bath or *in vacuo* to yield a thick syrup; 500 Gm. of lactose is added to give a paste and this is dried at 50°C. The dry powder is pulverized and 12.5 Gm. of the essential oil is added to give a powder which when dispersed in water, in the ratio of 1.5 Gm. per cup, gives an infusion resembling the natural product.

When dry leaves are used, these are steam-distilled to yield the oil. The residue is boiled for half an hour at 130°C. and is steam-distilled at this temperature to get rid of the "hay" odor. The boiling at 130°C. is continued for another half hour and the rest of the processing is carried out as described above.

Verbena leaves or balm mint (melissa) can be treated the same way to get powders. However, the process is modified for camomile by the use of petroleum ether to extract the oil. This is recombined with the powder; the petroleum ether being driven off to give the final product. Powders of this sort serve for the preparation of drinks or as condiments.

para-Cymene from Carene

In describing a process for obtaining *para*-cymene from carene, J. Verghese (*Current Sci.* 18:205, 1949) states that carene, obtained from Indian turpentine, is subjected to pyrolysis at 250°C. and a space velocity of 0.14 hour; ferrous sulfate, previously heated to 250°C. for three hours, serving as the catalyst. On a single pass, the yield of para-cymene, containing 25 to 35 per cent unsaturates, is 30.7 per cent. It is noted that the catalyst turns powdery after a single pyrolysis run.

Essential Oil of New Zealand Cedar

In studies of the essential oil of *Libocedrus bidwillii* or New Zealand cedar, R. D. Batt and C. H. Hassell (*J. Soc. Chem. Ind.* 68:359, 1949) found that steam distillation of the autumn leaves of this tree gave 0.29 per cent of a blue-green oil. It has the following characteristics.

Specific gravity	**0.8630**
Index of refraction	**1.4800**
Specific rotation	**–4.42°**
Saponification number	**16.5**
Saponification number after acetylation	**26.2**
Acid value	**0.014**

Fractionation of the oil gave 24.8 per cent of *l-alpha*-pinene; 3.3 per cent of *d*-sabinene; 2.7 per cent of myrcene, 7.4 per cent of dipentene and *d*-limonene; 4.2 per cent of *para*-cymene, 0.7 per cent of terpinolene, 1.4 per cent of 4-terpineol; 3.0 per cent of alpha-caryophyllene; 2.7 per cent of cadinene; 18.4 per cent of a new monocyclic sesquiterpene, gamma-curcumene; 3.7. per cent of an unidentified ketone ($C_{10}H_{16}O$); 5.8 per cent of an unidentified green oil, and 3 fractions of unidentified terpenes. The tarry residue, amounting to 8.2 per cent, yielded a small quantity of a mixture of paraffins, melting at 56 to 56.5°C.

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Color 5¼" Lovibond Yellow	1.0 - 2.0	2.0 - 3.0
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Acid Value	206 - 209	206 - 209
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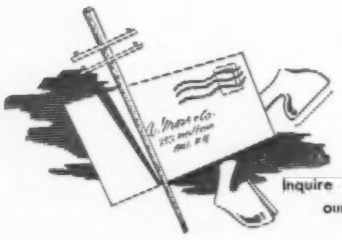

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ADVANCING THERAPY

Aureomycin for Gonorrhea

In a continuation of previous studies C. H. Chan, R. B. Dienst and R. B. Greenblatt (*J. A. M. A.* 143:724, 1950) have further established the value of aureomycin in the treatment of gonorrhea. In summarizing their new studies they report that 100 patients with laboratory-proved cases of gonorrheal infection were arbitrarily divided into two equal groups. Group A was given 1 Gm. of aureomycin orally three times daily for two days (6 Gm.), and group B was given the same daily dose for one day (3 Gm.). The results obtained from these two groups were identical: there was one failure in each group. Thus, the percentage of cure was 98 in each group. It was further noted that the majority of patients in group A were symptom free after 3 Gm. or less of aureomycin had been taken. Therefore, the 3 Gm. dosage seems sufficient. Toxic reactions were few and not serious. In several patients the disease, which had failed to respond to penicillin and other medication, yielded to aureomycin treatment. In view of this fact, plus the high percentage of cure and the comparatively simple method of administration, they feel that aureomycin has its definite value in the treatment of gonorrhea.

Bacitracin for Gangrene

In the *Annals of Surgery* (131:129, 1950), F. L. Meleney, F. Shambaugh and R. S. Millen report on the results obtained with bacitracin in the treatment of five patients with progressive bacterial synergistic gangrene. Four of the patients had not responded to penicillin therapy. Penicillin was not given to the fifth patient because of a previous allergic response. The patients illustrated the disease from its earliest development, before the occurrence of extensive destruction of skin, to a late stage, in which, after four months, all of the lower abdomen; the flanks and the upper portions of the thighs were involved. The patients exhibited typical clinical symptoms of progressive bacterial synergistic gangrene, which depends on the coincident presence of a Staphylococcus capable of producing gangrene in tissues already inflamed by the nonhemolytic microaeorphilic Streptococcus. All five patients responded promptly to bacitracin administered intramuscularly in doses of 10,000 to 24,500 units every six hours. Treatment was continued for 11 to 30 days with a total dose of 1,078,000 to 2,160,000 units. Bacitracin was also used locally in a concentration of 500 to 1,000 units per cubic centimeter, with a total dose of 78,000 to 357,000 units. Surgical excision was obviated in all patients. On the basis of these findings, Meleny and his associates are of the opinion that systemic bacitracin therapy started in a dosage of 400 units per kilogram of body weight every six to eight hours is the treatment of choice for progressive bacterial synergistic gangrene.

Local Medication for Perineal Pain

A. P. Hudgins (*Am. Pract. & Digest of Treat.* 1:310, 1950) makes the observation that postoperative perineal discomfort in gynecology or obstetrics is discouraging to the patient and physician. It effects the patient's ability to rest, take food and void. When pain is minimized the patient's recovery is smoother. When the mother is calmer and less tense after delivery, her milk supply may be increased. Local medication for relief of pain is preferable. It obviates the possible unwanted side effects from systemic medication or keeps in reserve this method if additional therapy is needed.

With this in mind, 4.5 per cent benzocaine with carbolic acid 1.7 per cent, menthol 0.5 per cent and ephedrine alkaloids 0.125 per cent in an oil base has been applied locally to the perineum and inserted within the rectal lumen. This solution is given to the patient and she is told that it may be used and repeated as frequently as required for relief of perineal pain. In reporting on the use of this medication in 64 obstetric and 36 gynecologic cases, Hudgins states that it was made available to all patients who had perineal sutures. Only two reported no relief. Three reported so little postoperative discomfort that the medication was not required. The remaining 95 welcomed the idea and the relief which they received.

Veratrum Viride in Hypertension

In any disease that is as prevalent as hypertension, say H. L. Holley and I. A. Koffler (*Am. Pract. & Digest of Treat.* 1:840, 1950) the need for a drug that will lower the blood pressure without producing harmful effects is great. In view of this fact, their clinic has been using veratrum viride during the past three years in an effort to evaluate this old drug, which has recently caused renewed interest.

The alkaloids of veratrum viride appear to have a hypotensive effect in patients with essential hypertension. This hypotensive effect is a separate and distinct feature from the slowing of the heart which results from the administration of the drug. A peripheral dilating effect is the most probable explanation of the action of the drug. This is shown by an increased blood flow to the extremities and organs after administration of the drug in therapeutic doses. After oral administration of the drug the hypotensive effect becomes manifest between two to six hours and lasts from 12 to 14 hours. Toxic symptoms were the most common causes of failure. The difference between the full therapeutic dose and toxic dose is so slight that occasionally the hypotensive effect coincides with the development of toxic symptoms. Care must be taken to determine the individual toxic dose and maintain the dosage just under this level. Cumulative effects of the drugs were another source of failure. Individual variation to toxicity and hypotensive effect was considerable. Development of resistance to the drug was noted, occurring most often in the long term treatment cases.

Veratrum was found to be of greatest value in the treatment of so-called "hypertensive crisis" and to a lesser extent, but definitely warranted, in long term care of chronic cases of e s s e n t i a l hypertension. In no way should this drug be construed to be a replacement for the regular regimens for less severe cases of hypertension, such as rest, psychotherapy, diet, and sedation. Veratrum viride is merely an adjunct to this therapy. There were no alarming toxic reactions to the drug.

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Choline in Atherosclerosis

The value of choline as a lipotropic in coronary atherosclerosis is indicated in the well controlled study made by L. M. Morrison and W. F. Gonzales (*Proc. Soc. Exper. Biol. & Med.* 73:37, 1950). They point out that a disorder in lipoid or cholesterol metabolism has been shown to be a significant factor in the development of atherosclerosis in man. In a series of 115 patients with proved atherosclerosis treated with choline during a three-year study, the mortality rate was 12 per cent as compared with a rate of 30 per cent in a series of 115 patients with atherosclerosis who did not receive choline. Both series were studied at the Los Angeles County Hospital and consisted of patients proved to have acute coronary thrombosis with initial myocardial infarction. The two series represented alternating admissions. Choline was given in a daily dose of 6 to 32 Gm., depending on the degree of hypercholesterolemia present and the patient's tolerance. As a lipotropic agent choline acts to prevent arterial atheromatous deposition or to exert a decholesterolizing effect on atheromatous deposits in the vascular walls. Deaths in each series were due to recurrent coronary thrombosis with myocardial infarction, congestive heart failure, or to extracardiac causes.

Bacitracin for Amepiasis

H. Most, J. W. Miller, E. B. Grossman and N. Conan, Jr. (*J. A. M. A.* 143:792, 1950) have found that the antibiotic bacitracin given by mouth is an effective agent in terminating acute attacks of amebic colitis. Complete clinical recovery, healing of ulceration and disappearance of amebas occurred in eight severe cases. In one of these clinical and parasitic relapse occurred nine months after therapy, and in three parasitic relapse occurred without clinical activity or evidence of disease five, eighteen and three hundred and fifty days after therapy. In one severe case bacitracin was effective after other amebicidal drugs and antibiotics, including aureomycin, failed to terminate the infection. Of 43 mildly symptomatic or asymptomatic patients who received one or more courses of bacitracin, apparent cure resulted in 80 per cent. The probability of cure from a single course of treatment is 66 per cent. The recommended dose is 80,000 units daily for ten days. Toxicity from oral medication is negligible.

These clinicians feel that bacitracin represents an important and potent addition to the agents available in the chemotherapy of intestinal amebiasis. The use of this antibiotic alone or in combination with other amebicidal drugs should materially increase the probability of cure in any given case.

Ascorbic Acid for Rheumatic Fever

Stressing that their report is definitely one of a preliminary character, B. F. Massell, J. E. Warren, P. R. Patterson and H. J. Lehmus (*New England J. Med.* 242:614, 1950) state that, when given large doses of ascorbic acid, the responses of a group of seven patients is sufficiently impressive as to warrant the publication of their findings. Their observations suggest that ascorbic acid in doses of 4 Gm. daily possesses antirheumatic activity.

Although others have suggested that vitamin C may play a role in the etiology and treatment of rheumatic fever and arthritis, as far as can be determined, a beneficial effect of ascorbic acid on the course of active rheumatic fever has hitherto not been demonstrated. These previous therapeutic failures may perhaps be attributed to the fact that practically all investigators were thinking in terms of vitamin C deficiency and, hence, used doses of ascorbic acid considerably smaller than those used by Massell and his colleagues. They note that although acorbic acid is generally considered innocuous, and although no untoward reactions have been encountered in the course of their limited observations, there is obviously a need for careful toxicity studies.

Dangers of the Antibiotics

A warning as to the dangers of the antibiotics is sounded in the report of P. H. Long, E. A. Bliss, E. B. Schoenbach, C. A. Chandler and M. S. Bryer (*Lancet* 1:1139, 1950). Following a discussion of the experimental background and clinical uses of these agents, these authorities state that owing to its widespread (and often very injudicious) use, reactions to penicillin are rapidly increasing in numbers and in severity. Streptomycin and dihydrostreptomycin may produce permanent vestibular dysfunction or deafness or both; and as there are better and less toxic antibiotics for other types of infections, their use should be limited to tuberculosis. To date, aureomycin and terramycin have been relatively non-toxic, if nausea, vomiting, sore mouth, and diarrhoea are excluded from consideration. Chloramphenicol is known to cause granulocytopenia and therefore might cause agranulocytosis. It is too early to say whether the population will become as reactive to these last three antibiotics as it has to penicillin. Only time will tell. They conclude by emphasizing that up to the present all antibiotics have proved poisonous to some patients and hence these agents should be used with care and thought.

Salicylates in Acute Osteomyelitis

In the *Lancet* for July 29, 1950 (p. 169), P. G. Konstam and M. J. Meynell describe an unusual effect obtained by the administration of large doses of sodium salicylate or aspirin to patients with acute osteomyelitis who responded poorly to penicillin. These cases may be of interest in view of the growing number of penicillin-resistant strains of *Staph. aureus*.

In 1945 a middle-aged woman was admitted to hospital with severe burns of trunk and extremities. The lesions became infected with *Staph. aureus* despite penicillin therapy. Subsequently the patient developed a pericardial effusion. The house-surgeon, considering this to be of rheumatic origin, put the patient on large doses of salicylates. The pericarditis cleared rapidly and the burns very quickly healed, the patient making a rapid recovery. Since the "rheumatic" origin of the heart lesion seemed unlikely, it was thought that there might have been a synergistic effect of penicillin and salicylate on penicillin-resistant staphylococci. There happened to be a patient in the ward at the time with severe subacute osteomyelitis of the upper humerus which was not responding to penicillin. As soon as he had been given a day's course of sodium salicylate gr. 30 three-hourly, his temperature fell to normal and his condition improved dramatically.

In spring, 1949, the opportunity arose to treat four further cases of proved acute osteomyelitis in the manner described. In all of them striking clinical improvement followed the administration of large doses of salicylate. At present these workers offer no explanation for this effect. However, the possibility of a synergistic action of penicillin was considered, with negative results. The possibility that large doses of salicylate might act directly on the kidneys and prevent the excretion of penicillin was also investigated, also with negative findings.

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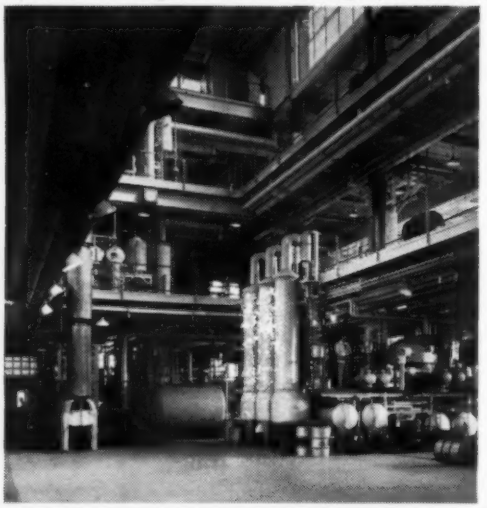

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ABREAST OF THE MARKETS

SCARE BUYING CONTINUES, ESSENTIAL OILS UP SHARPLY; BOTANICALS DEVELOP SCARCITIES; ALCOHOL SITUATION SERIOUS, MOLASSES LOW

The Korean crisis brought about still higher prices last month and, what may prove to be, severer shortages in the markets, especially in the essential oils, some advancing several dollars. A large number of botanicals became firmer, but this was due, in part, to rainy periods in the southern region of the United States which hindered drying of crop collections. The labor supply is low since the men are being attracted to industrial centers. As far as foreign commodities are concerned, the firmness is due to depleted crops.

A number of chemicals, tartrates and salicylates, advanced during August, but these increases were all due to increased production costs and were not related to the foreign situation.

But most marked of all was the general advance in the essential-oil prices, best represented in the graph on page 399. The index catapulted from 120.7 in July to 140.9 in August, the highest point reached since the second quarter of 1947 when the index declined to 140.9 on its way down from the 1942 high of 240. A year ago, in August, 1949, the essential oils index was 82.0

The sudden demand and flood of scare buying which took place in July and early August was said to be greater than the similar activity which occurred prior to the second world war. Consumers could remember only too well the shortages, controls, and government allocations which developed and were clamped on very suddenly just after America's entry into World War II. And for this very reason they decided to stock up heavily while everything was plentiful. One dealer reported a backlog of essential-oil orders which under normal conditions would have been distributed through a period of six weeks. Out of this frenzied market condition last month there emerged the fact that as many as ten essential oils were getting low in supply. While no government control or allocation was in the wind, essential oil sources suggested they might have to institute their own controls to avert any serious shortages.

Toward the end of the month, however, the heavy buying seemed to taper off, with reports that essential-oil houses had limited their stocks to six months in advance. The concensus in the trade was that conditions would most probably remain steady, unless another "civil war" or a similar international emergency develops in the months ahead in other parts of the world.

Oak moss, for example, was becoming less plentiful, perhaps because consumers, anticipating hostilities in Yugoslavia, had stocked up more than usual. The same reasoning is plausible in the case of patchouli (Singapore), sandalwood, lemongrass, and ginger oils from British East India, citronella and cardamom (Ceylon and Southern India), and of course, oils like anise, cassia, and coriander which originate in China and Russia. These oils, and those botanicals which also are derived from the Far East, at present the trouble spot of the world, increased in price last month, because consumers bought up future stocks, to prepare for any contingency which might arise.

In the botanical field, the general advance was much less than that of the essential oils. The most drastic price jump occurred in papain, which could not be attributed to any great extent to the war, for this item has been on its way up ever since the first of the year. According to one report, there is a disease on the plants which has decreased the size of the crops. Having advanced $1.50, the current range on papain now extends from $4 to $6.

Dandelion root is no longer available domestically, and deliveries from Europe are six months behind, because of a very short crop there. As a result this item advanced 9c to the current level of 54c. In many cases this is the explanation, although there has been a rush to buy in this field, as in the essential oils.

• Prices quoted in this section were current on the first of this month.

Alchol Short, Price Up

Denatured alcohol No. 1 Special, became desperately short last month, according to a spokesman, who attributed it to two factors, the increased industrial activity of this country, along with the dire shortage of the raw material, molasses, in Cuba. Quoted now from 58½c to 67½c, the alcohol on hand is said to be in such small supply that other sources than molasses are being considered, one major producer is already producing larger quantities of the grain alcohol. The over-all alcohol picture is said to be more serious than in the corresponding period before World War II.

Waxes Become Firmer

There was a general upward trend among the waxes during August, which, according to one source, was most likely due directly to the Korean war. In the case of carnauba wax, the barter material had been mostly disposed of, and the No. 1 grade had advanced as much as 21c, to the figure of $1.18, far outstripping the previous government-established floor price of $1.05. Offerings from Brazil were few during August, and they were firm. Spot prices of the wax in New York were being quoted on a lower level than these prices from the origin.

Dealers in Brazil were said to have made offerings on future stock at this higher price level—stock which will not be collected until October, and the crop size of which had not yet been determined.

Demand for the wax seemed to be greater than normal for this time of the year, as was also the case with candelilla. The candelilla wax advanced by 63c, probably in sympathy with the carnauba, since the former, although more tacky and not quite so hard as carnauba, can nevertheless be mixed with it in small proportions in the manufacture of polishes. Carnauba wax No. 3 went

(Continued on page 398)

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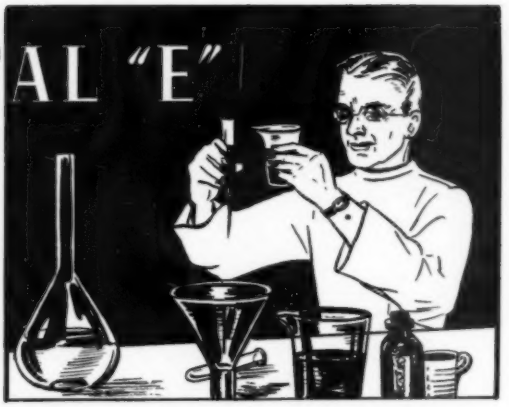

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GLYCERINE PRICE UP FITFULLY AS DEMAND INCREASES; SALICYLATES, TARTRATES HIGHER; COD LIVER OIL UP

Glycerine jumped ahead quite erratically during the last week of August with the various producers quoting from 35¼c to 50¼c a pound for the refined, depending on the source. The entire situation seemed to stem from the unusually high prices quoted on the crude glycerine, which varied from 35c to 45c, and higher. So high were the crude prices, in fact, that most refiners indicated they could not buy the material at the prices offered without suffering a loss—with the current price level in the refined glycerine. As a result, many refiners were refining only their own crude-glycerine supplies, refusing to pay the higher crude prices offered on the outside. This, in turn, began to produce a severe shortage in the refined glycerine.

As fast as the crude glycerine was produced in the manufacture of soap, according to one source, this by-product glycerine was immediately sold to the heavy industry consumers who were gulping it up, regardless of the mounting price. The faster the crude glycerine was ordered, the higher the price rose.

No relief was in sight, nor were there any indications that the government would clamp on any restrictions, until after the November elections. No stockpiling in general was indicated, for if a ceiling price is to come in the next six months or so, the price is expected to be established at a much lower level than the current selling price of the glycerine. No consumer, therefore, is going to buy up stocks at the current high price when it is very possible the price will be frozen at a much lower level in future months after the government sets politics aside and gets down to the business of waging a war.

Salicylic Acid and Salicylates Advanced

Both salicylic acid and acetylsalicylic acid went up 2c last month, the former now being quoted from 42c to 47c for a 100-lb. barrel and 25-lb. drum respectively, and the latter, from 52c to 55c for a 250-lb. (and 100-lb.) drum and 25-lb. drum, respectively. Methyl salicylate went up 3c to 45c for a 500-lb. drum and 50c for a 50-lb. drum, while sodium salicylate advanced 2c from 59c to the current level of 61c for a 100-lb. drum and 66c for a 25-lb. drum.

Tartrates and Tartaric Acid Advanced

Tartaric acid went up 2c last month to 32c for a 230-lb. drum, 33c for a 100-lb. drum, and 35c for 50 lbs. Additional tartrates which were advanced last month include potassium bitartrate (28c for a 250-lb. drum) and potassium sodium tartrate (29c for a 225-lb. drum). Cream of tartar went up 1½c to 28c for a drum, while rochelle salt advanced 1c to 29c a drum.

Cod Liver Oil Higher

Because consumers rushed to buy stocks of cod liver oil early in July and August, instead of in September, an artificial shortage developed in the spot supplies. This has caused an upward revision of the prices by 10c to 20c a gallon, the oil now being quoted from $1.55 to $1.65 a gallon on spot. The 30-gallon drum, formerly set at $41 c.i.f., Norway, is now quoted at $45.

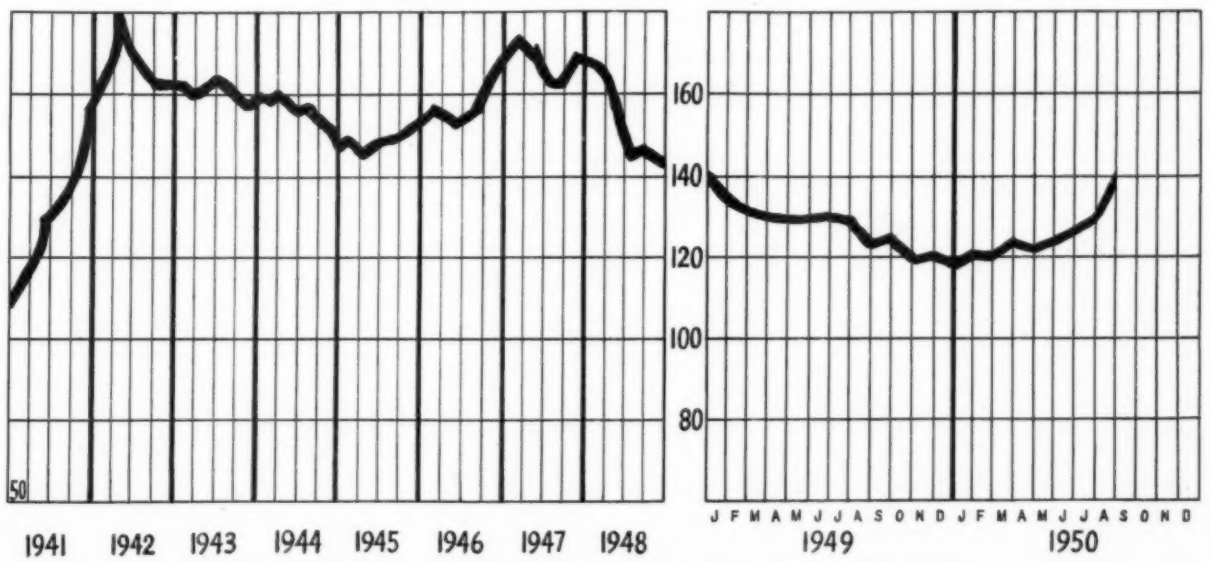
By the end of last month it was expected that this shortage would prove to be only temporary, since shipments were scheduled to arrive in September and subsequent months which would tend to replenish the depleted spot supplies. One source warned, however, that although a sufficient supply will probably be available to satisfy all normal demands in the future, nevertheless, a sudden deterioration of world conditions might very well promote a new fear and cause additional rush buying, resulting in an even more severe shortage.

The present condition of the cod liver oil market is in direct contrast to that of five months ago, when dealers were anticipating a lower price.

Cod Liver Oil Production, Exports

The production of steamed refined cod liver oil during the 1950 season reached a total of 2,006,753 United States gallons, compared with 1,544,024 gallons the preceding year. Production during the same period in the three

50 Raw Materials—Weighted Price Index. 1926 = 100.



The price index of fifty commodities for August advanced from 131.1 to 142.3.

AUGUST PRICE CHANGES

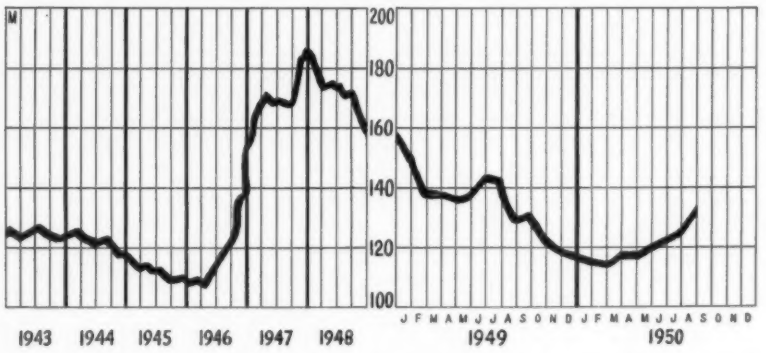
UP

Acetylsalicylic Acid 2c
Denatured Alcohol No. 1 Spec 5½c
Ethyl Alcohol U.S.P. 190 pr. 6c
Almond oil, sweet 5c
Angostura Bark 5c
Anise Seed Star 3c
Anise Oil, U.S.P. 15c
Apricot Kernel Oil 4c
Arabic Gum, White No. 1 2c
Balsam Copaiba Para 70c
Balsam Peru 15c
Barberry Bark 17c
Beeswax, White 6c
Benzoin Gum, Siam 40c
Bergamot Oil 85c
Cade oil 8c
Candelilla Wax 15c
Cardamom Oil $5
Carnauba Wax No. 1 21c N. Country No. 3 16c
Cassia Oil, Redist. $1.25
Cedar Leaf Oil 10c
Cedar Wood Oil 7c
Citronella Oil, Ceylon 15c Java 20c
Clove Oil 5c
Cod Liver Oil, U.S.P. 15c
Coumarin 30c
Cream Tartar 1¼c
Dandelion Root 9c
Geranium Oil, African $4 Bourbon $6
Glycerine, CP 5½c
Golden Seal Root 50c
Ipecac Root 30c
Juniper Berry Oil 25c
Lanolin 1c
Lavender Oil $1
Lemon Oil, Calif. 75c
Lemon grass oil 65c
Manganese Glycerophosphate 35c
Menthol, natural $2
Mercury $5
Methyl Anthranilate 5c
Methyl Salicylate 3c
Montan Wax 1c
Mullein Leaves 4c
Orange Oil, Amer. Cold Pressed 35c
Ouricury Wax 15c
Papain, Pure, Powd. $1.50
Patchouli Oil $1.25
Petit Grain Oil, S. A. 30c
Pimento Berry Oil 65c
Pimento Leaf Oil 20c
Plantago Seed, Blond 4c
Psyllium Seed, Black 3c
Rochelle Salt 1c
Sabadilla Seed 10c
Salicylic Acid 2c
Senega Root 50c
Senna Tinnevelly 5c
Sodium Salicylate 2c
Tartar Emetic 1c
Tartaric Acid 2c
Terpineol 6c
Vanilla Beans, Bourbon 25c
Witch Hazel Bark 3c
Wormseed Oil 15c

DOWN

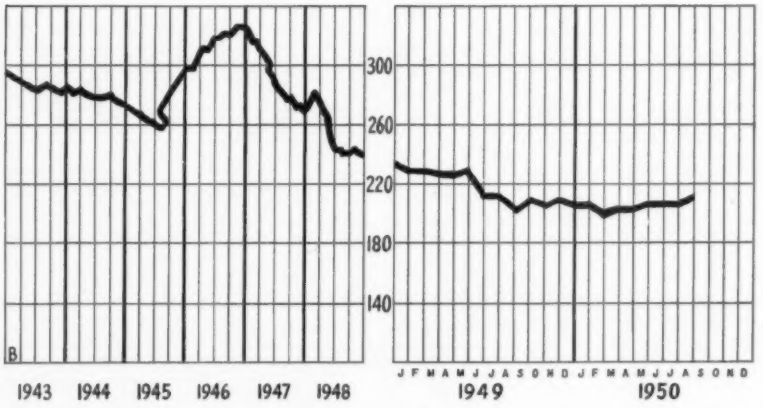
Beladonna Leaves 5c
Passion Flower 20c
Saw Palmetto Berries 3c

15 Medicinal Chemicals—Weighted Price Index. 1926 = 100.



The medicinal chemicals index advanced from 125.1 to 132.8. Alcohol, cod liver oil, cream of tartar, menthol, and mercury were higher.

15 Botanicals—Weighted Price Index. 1926 = 100.



The botanicals index advanced from 205.0 to 209.6. Ipecac root and senna went up; belladonna went down.

previous years was 1,467,624 in 1948, 2,948,853 in 1947, and 2,657,178 in 1946.

Exports of steamed medicinal cod liver oil in gallons from January 1 to June 10, 1950, amounted to 452,785. Exports in 1949 were 249,936 gallons, and in 1948, 679,300. Exports to the United States during the first 4 months of 1950 were 49,929 gallons, valued at $63,343.

Waxes Become Firmer

(Continued from page 395)

ahead 14c to the range between 92c and 94c, while montan wax advanced to 16c. Refined ouricury wax went up 15c to the 91c level, resulting from a scarcity of the product in Brazil, and spermaceti, which originates in Central Europe, advanced 2c to the current quotation of 23c.

Carnauba Wax Production Figures Revised

The 1949-50 carnauba wax crop in Brazil is expected to total more than 11,000 metric tons, or about 10 per cent greater than earlier estimates. Estimated production in metric tons in the various states is as follows: Plaui, 5,100; Ceara, 4,600; Rio Grande Do Norte, 700; Bahia, 550; and Paraiba, 200.

Exports of Carnauba wax in 1949 reached one of the largest totals on record, according to preliminary estimates. This figure, 11,110 tons ($18,342,000), has been exceeded only twice, in 1941 (11,766 tons) and in 1944 (11,130 tons). The United States imported 80 per cent of Brazil's total 1949 wax production.

Menthol Remains Very Firm

Following the initial spurt of scare buying which occurred just after the outbreak of the war, dealers report that buying has become more orderly and less frantic, although the available supply still remains small. During the latter part of August declarations of shipments were received in New York, which eased the tension among buyers who were awaiting word from China. Even though there seemed to be less anxiety in the market toward the latter part of August, the price nevertheless continued to inch upward to anywheres from $14.50 to $15.50, or $2 more than was quoted in July.

Hardly any offerings came out of Brazil, chiefly because that country has been selling menthol directly to Europe through the ECA at top prices and refused to consider quotations which were on the same par as those emanating

from China. Any predictions about the future of the menthol market are purely conjecture at this time, as the situation depends wholly on the outcome of the current war in Korea. Should the UN forces score a series of overwhelming successes against the northern armies in future months, Chinese menthol might fall in price. On the other hand, if the North Korean forces manage to defeat the UN forces, the shipping lanes to and from Chinese ports might become inaccessible, and the menthol supply would dwindle, resulting in mounting quotations.

Citronella Oil Higher

Both the Java and the Ceylon citronella oil advanced during August, the former now being quoted from $1.40 to $1.60 and the latter, from $1.80 to $2.10.

The declared exports of citronella oil from Formosa to the United States during May amounted to 40,800 pounds valued at $56,080, as compared with 85,000 pounds ($84,281) from that source during the entire year of 1949.

Lemongrass Oil Up 65c

Increased shipping costs forced the price of lemongrass oil up to $2.50 last month from the previous quotation of $1.85.

The production of lemongrass oil in India during the 1949-50 season (July to January) is estimated between 360 and 400 long tons, compared with the estimated 300 long tons in the 1948-49. Exports in 1949-50 (April-March) were 350 long tons.

Bergamot Oil Up Sharply

Bergamot oil jumped ahead 85c last month to the range between $5.50 and $5.75. While spot stocks in New York were said to be low, the Consortium in Italy simultaneously announced there would be no shipments of the oil during September.

Geranium Oil Way Up

Both the African and Bourbon geranium oil prices advanced steeply in August, the Algerian oil now being quoted from $23 to $30, and the Bourbon from $26 to $35.

Alcohol Production in June

The Alcohol Tax Unit, Bureau of Internal Revenue, Treasury Department, last month released the following data on the supply, production, withdrawals, and stocks of ethyl, completely denatured and specially denatured alcohol during the month of June, 1950, in comparison with June, 1949.

Production

	Proof gallons	
	1950	1949
Ethyl	31,107,994	31,796,352
*Completely denatured	81,966	75,669
*Specially denatured	19,064,392	16,499,626

Withdrawals

	Wine gallons	
	1950	1949
†Ethyl, tax paid	4,187,696	3,039,766
tax free	34,890,947	30,853,063
*Completely denatured	75,423	77,627
*Specially denatured	18,311,194	14,352,339

Stocks

	Gallons	
	1950	1949
†Ethyl	23,228,709	51,015,381
*Completely denatured	85,962	105,362
*Specially denatured	2,144,388	8,640,566

*Wine gallons. †Proof gallons.

Smaller 1950 Mint Crop Expected

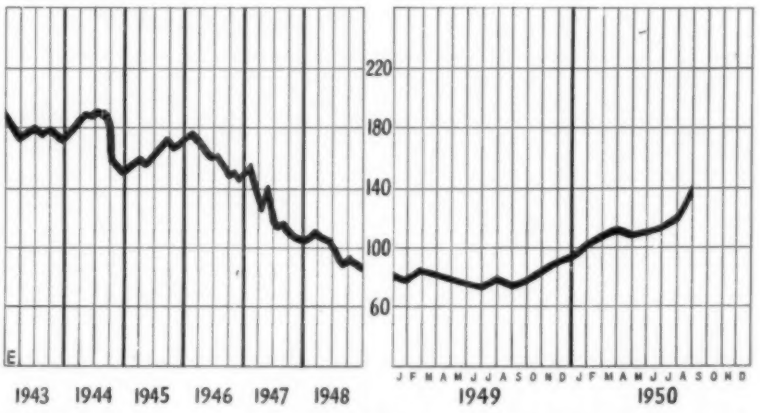
The 1950 production of the commercial mint crop for oil has been estimated by the Department of Agriculture at 2,104,000 pounds, of which 1,583,000 pounds is peppermint and 521,000 is spearmint. Based on conditions as of August first, this estimate indicates a 3 per cent reduction from last year's output of 2,168,000 pounds but 37 per cent greater than the ten-year average of 1,541,000 pounds.

The spearmint crop is expected to be 9 per cent smaller than last year, and the peppermint crop, 1 per cent less. The smaller mint crop is attributed to less acreage and lower acreage yields this year than in 1949 in Indiana, the largest producing state. Both Michigan and Oregon have slightly smaller acreages this year but the expected higher yields this year more than off-set this. Both acreages and average yields are expected to be greater than those of last year in the state of Washington.

This year's estimated production, in pounds of oil, as compared with actual production last year, is reproduced below.

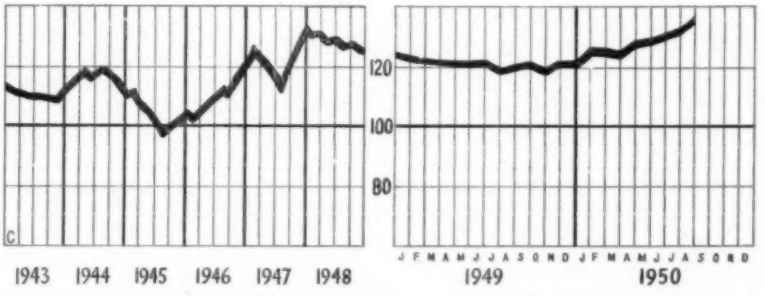
	1950	1949
Peppermint:		
Indiana	429,000	551,000
Michigan	270,000	200,000
Ohio	....	....
California	....	....
Oregon	619,000	609,000
Washington	265,000	235,000
Total	1,583,000	1,595,000
Spearmint:		
Indiana	310,000	393,000
Michigan	211,000	180,000
California	....	....
Total	521,000	573,000
Grand total	2,104,000	2,168,000

15 Essential Oils—Weighted Price Index. 1926 = 100.



The essential oils index rose steeply from 120.7 to 140.9. Anise, bergamot, cassia, citronella, clove, geranium, and lavender oils all went up.

25 Cosmetic Raw Materials—Unweighted Price Index. 1926 = 100.



The cosmetic raw materials index went up from 131.3 to 136.8. Alcohol, arabic gum, balsam copaiba, balsam peru, beeswax, candelilla wax, glycerine, lanolin, menthol, and spermaceti wax were higher.

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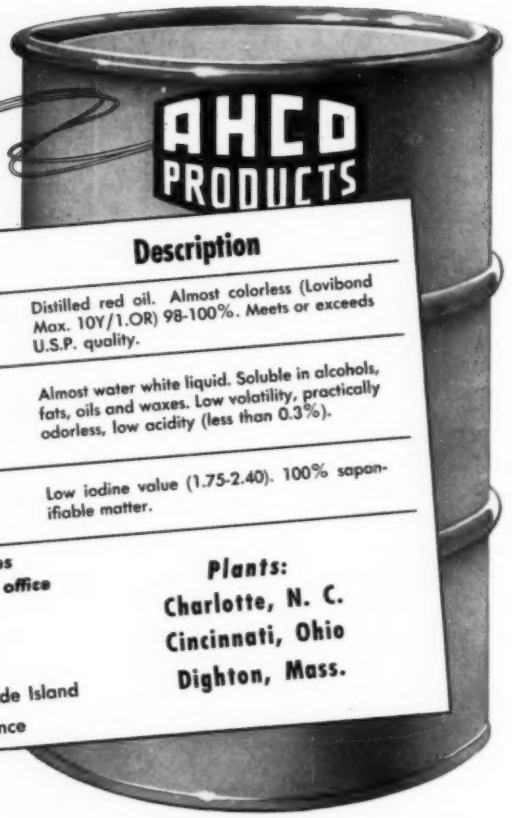

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TRIPLE PRESSED STEARIC ACID	Cosmetics, Pharmaceuticals, Emulsifying Agents, Esters.	Low iodine value (1.75-2.40). 100% saponifiable matter.

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READERS' QUESTIONS

COLD PERMANENT WAVES: Can you supply me with a formula for a home permanent wave lotion and fixative? Brooklyn.

From time to time, we have included information on such products in our Compounder's Corner and Readers' Questions departments. I refer you particularly to an item which appeared in our June 1949 issue, page 749.

As you are probably aware, many cold wave products are covered by patent and at the moment considerable litigation is under way concerning prior rights. However, a cold wave solution, which is said to be adaptable for home use, is described in U. S. Patent 2,350,178. The ingredients of the lotion are as follows:

Thioglycolic acid	**10 gm.**
Sodium hydroxide	**7 gm.**
Hydroxylamine sulfate	**10 gm.**
Water	**100 cc.**

After the lotion has been in contact with the hair for 15 minutes, the following mixture is applied to stop the action of the waving solution:

Water	**500 cc.**
Hydrogen peroxide (20 vol.)	**500 cc.**
Tartaric acid	**30 gm.**

POISON IVY PREPARATIONS: We are anxious to learn about the remedies used for treating poison ivy either by brand or specific formula. If such information is available, we should greatly appreciate receiving it. New York City.

First off, I would suggest that you check any standard work on dermatology. Secondly, I would suggest that you consult the "Modern Drug Encyclopedia" by M. E. Howard, published by the Drug Publications Inc., New York.

With respect to specific remedies, I should like to point out that calomine lotion, often containing a little phenol to relieve itching, is a standard preparation for poison ivy. Recently, certain of the antihistamines have found similar employment. Very commonly used are ointments containing small proportions of local anesthetics.

Concerning specific preparations, the following poison ivy lotion, as given by Goodman, has long been used and is widely recommended:

Ferric chloride	**2**
Sodium chloride	**2**
Glycerine	**24**
Distilled water, enough to make	**100**

Dissolve and mix.

Another type of a soothing lotion for poison ivy is:

Camphor	**0.8**
Menthol	**1.0**
Boric acid	**2.0**
Sodium bicarbonate	**2.0**
Alcohol or isopropyl alcohol	**24.0**
Distilled water, enough to make	**100.0**

Dissolve the camphor and menthol in the alcohol and the boric acid and sodium bicarbonate in 75 parts of water; pour the alcoholic solution gradually into the aqueous solution and, after the mixture has been permitted to stand for 24 hours, filter.

An ointment containing a local anesthetic may be made from the following:

Ethyl aminobenzoate (Benzocaine)	**4**
Boric acid	**4**
Lanolin	**12**
Petrolatum, enough to make	**100**

Incorporate the powders in a mixture of the fats.

LESS GREASY HAIR DRESSING: Could you please send me a formula used in the manufacture of emulsion type hair grooms which are less greasy than the oils themselves? Duquesne.

I am not certain as to what you mean by preparations "which are less greasy than the oils themselves." I assume that you mean a liquid hair dressing made on the following order:

Petrolatum	**7.5 per cent**
Mineral oil	**37.7 " "**
Lanolin, anhydrous	**3.0 " "**
Sorbitan sesquioleate	**3.0 " "**
Beeswax, white	**2.0 " "**
Borax	**0.5 " "**
Water, to make	**100.0 " "**
Perfume	**Sufficient**

The instructions for preparation are to mix together the petrolatum, the mineral oil, the lanolin, the sorbitan sesquioleate, the beeswax, and heat the mixture to 75°C. The borax is dissolved in the water, brought to the same temperature, and added slowly with moderate but thorough agitation. If agitated until cold, this becomes quite thick.

LIQUID SKIN CLEANSER: Can you give me a simple formula for making a liquid skin cleanser, one that could also be used in the summer? New York.

One of the simplest of such preparations is suggested by an expert as follows:

Propylene glycol	**5.00 per cent**
Sodium lauryl sulfate	**0.50 " "**
Water	**94.50 " "**

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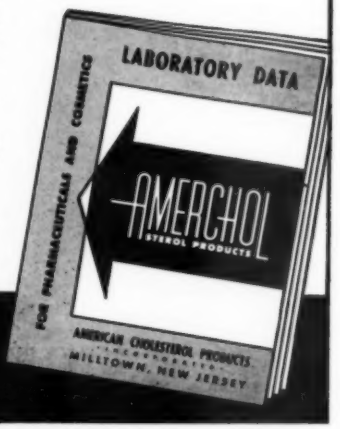

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INDUSTRY'S BOOKS

The Merck Manual of Diagnosis and Therapy, Eighth Ed., 1592 pp., regular ed. $4.50, thumb-index ed. $5., Merck & Co., Inc., Rahway, N. J.

The new Golden Anniversary Eighth Edition of The Merck Manual exceeds all previous additions in scope. Approximately 1,600 pages in length, the new edition contains 338 chapters in Part I on the diagnosis and treatment of diseases (82 more chapters than in the peceding edition). New or expanded chapters include those on nutritional deficiencies, radiation reactions and injuries (including those due to atomic bombs), allergies and antihistamines, psychoneuroses, drug addiction, dental emergencies the physician may have to treat, prenatal and postnatal care, and the care of premature infants. In Part II will be found new chapters on routine immunization measures, clinical and bedside procedures, laboratory tests practicable for the physicians's office, suggested items for the physicians' bag, and outline of preoperative and postoperative care, a section on diets, and helpful ready reference data and conversion tables. Medical experience gained in World War II and the phenomenal advances in medical science since then are reflected throughout the new volume, which is published just one decade after the seventh edition in 1940, and half a century after the first edition in 1899. Since publication of the preceding edition, the introduction of penicillin has revolutionized the treatment of pneumonia, syphilis, gonorrhea, and other important conditions. Dihydrostreptomycin and streptomycin—antibiotics of great value against tuberculosis and certain other infections—were then unknown, as were aureomycin, chloromycetin, and bacitracin. Details of treatment with these and other new drugs are presented in the chapter on Antibiotic Therapy, which includes a convenient table outlining the "Recommended Chemotherapy in more Common Infections. Many similar tables for ready reference on other subjects appear throughout the book. Treatment with crystalline Vitamin B_{12}, the pure anti-anemia factor that was first isolated and made available 1948-49, is covered in the chapters on megaloblastic anemia and spruce. The latest available information at printing time on Cortisone and ACTH is given in the chapter on Adrenocortical and Related Therapy. In addition to descriptions of their metabolic, hormonal and other physiologic effects, clinical results to date are cited for the following diseases: rheumatoid arthritis, rheumatoid spondylitis, acute rheumatic fever, gouty arthritis, psoriatic arthritis, acute disseminated lupus erythematosus, acute dermatomyositis, allergic asthma, Addison's disease, ulcerative colitis, nonspecific iritis or iridocyclitis, Lieffler's pneumonia, periarteritis nodosa, the nephrotic syndrome, Hodgkin's disease, acute, subacute and chronic lymphocytic leukemia and acute myelocytic leukemia.

The Petroleum Chemical Industry, by Richard Frank Goldstein, B. Sc., Ph.D., (Lond.), 449 pp., John Wiley & Sons, Inc., New York, $8.50.

The primary objective of this book is to survey the fields of industrial chemistry in which oil is the most economic starting material. In some cases, however, oil is used with coal or vegetable products. For example, ethylene alcohol is manufactured both from oil via ethylene and by fermentation processes, and from coal via carbon monoxide and methyl alcohol. In order to make the competitive problem reasonably clear, information on the non-petroleum routes has been included where appropriate. The author also considered it worthwhile to include subjects where the oil route has not yet been established as the most economic one but where minor improvements in technique may swing the balance in its favor. Chapter I deals with source materials—the hydrocarbons present in crude petroleum or produced as by-products in the refining operations of the petroleum industry itself. Chapters 2-5 treat the chemistry of paraffins. Chapters 6-10 cover the manufacture of olefins and the chemical developments based on them. The manufacture of other classes of hydrocarbons—diolefins, naphthenes, aromatics, acetylene—are discussed in Chapters 11-14. Chapters 15-19 consider the manufacture and reactions of the principal classes of petroleum chemicals. Chapter 20 presents a summary of the chemical by-products—usually non-hydrocarbon arising from refinery operations.

Taxes and Economic Incentives, by Lewis H. Kimmel, 217 pp., The Brookings Institution, Washington, $2.50.

Governmental expenditures have become so large that the required revenues can be raised only in a vigorous and flourishing economy. The object of this study is to appraise the principal taxes now employed from the standpoint of their effects on economic incentives. Following a background discussion of taxable capacity, the economic effects of the several types of taxes are examined. Major emphasis is placed on the reactions of the taxpayers. Businessmen, tax administrators, and students of taxation will find the analysis authoritative and informative.

Handbook of Employee Selection, by Roy M. Dorcus, Ph.D., Professor of Psychology, University of California, and Margaret Hubbard Jones, Ph.D., Research Assistant in Psychology, The State College of Washington, First. Ed., 349 pp., McGraw-Hill Book Co., Inc., New York, $4.50.

Of special interest to personnel managers, industrial psychologists, consulting management firms, and students of industrial and business psychology, this book gathers together all relevant information contained in many widely scattered references dealing with the selection of employees by means of scientific procedures. This material is presented in sufficient detail to obviate the need of referring to original sources in most instances. All types of regular, civilian-paid employment—factory and clerical, teaching and executive—are included. Covering published material through 1948 and a number of unpublished studies as well, this volume is complementary to many texts in personnel psychology, testing and selection, etc. It does not deal with general methods but permits the student to locate quickly reported studies which deal with a particular job or test, and to ascertain whether any work has been done which might serve as a starting point for further investigation.

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Motion Sickness

(Continued from page 333)

importance in the causation of motion sickness. In the supine position, 5 per cent of 825 subjects became ill, while in the sitting position swing sickness was increased to 27.5 per cent. Referring to this and other experiments, Tyler and Bard state that the results of these studies "afford almost a super abundance of evidence that labyranthine stimulation is the primary factor in the etiology of motion sickness."

Fatigue, dietary or alcoholic excesses, mild disturbance or disease of the gastrointestinal tract or mild infections of the upper respiratory tract may also contribute to motion sickness susceptibility.[11] Apparently, as remarked by Bakwin,[8] various types of stimuli may set off the syndrome and different conditions modify the picture in different individuals.

Older writers in the field of motion sickness and some of the more modern workers have called attention to the psychic factor in this disorder. The fear and anxiety associated with travel by air, for example, undoubtedly contributes to the illness in some cases. Many other authorities, however, tend to discount the psychic element. Thus, Damran[13] has pointed out that among the data militating against the psychologic views is the fact that animals suffer from motion sickness. Even fish are susceptible; specimens transported from the Galapagos Islands to the New York Aquarium were reported [14] to have become seasick.

Indicative, too, are studies such as those made by Wendt[15] on Army and Navy personnel. He found that these subjects did not get sick, even though psychologic factors were present, unless the combination of physical and physiological factors were appropriate.

On the basis of their own observations and from a review of the literature, Tyler and Bard[2] report that the results of well controlled psychological studies give little evidence that there is a close relationship between common psychosomatic complaints or personality disorders and susceptibility to motion sickness. Particularly noteworthy is their conclusion that, "The absence of any acceptable evidence that psychological or emotional factors are of substantial significance in the etiology of motion sickness suggests that psychotherapy holds little promise of aiding in the control of this disorder."

There are, of course, a number of measures that may be used in the general treatment or, better still, the prevention of motion sickness. Thus it is advised that susceptible individuals should avoid alcoholic or dietary excesses before or during a long trip. During the first period of exposure, fluids and only the simplest of foods should be taken in small quantities at frequent intervals. Reading or any other unusual visual stimuli should be avoided and a supine or recumbent position is recommended.

Especially important, in view of current trends,

is the comprehensive and widely cited report of Whittingham, Barbour and Macgown[16] on medical fitness for air travel. In discussing the prevention of airsickness, they note that a number of factors predispose to this condition, such as fatigue, type of meal, noise, vibration and cold. Advice should therefore be given regarding the need for sound rest the night before, proper evacuation of the bowels, a light meal about an hour before taking off, and small light meals during the trip.

As was shown in a number of reviews,[17,18,19] including one[20] published in this journal, quite a large variety of substances were used as remedies and preventives for motion sickness. Among the drugs most often used prior to World War II were the bromides, chloral hydrate, glyceryl trinitrate, amyl nitrate, cocaine, morphine, chloroform and ether. These and other drugs were used individually and in combination. It is evident that many of them were used to induce some degree of somnolence until the trip or the bad weather was over.[2]

Smith,[21] an authority on the pharmacology of agents used in the treatment of airsickness, finds it surprising that many studies have been made on motion sickness with mixtures of drugs without first determining the effectiveness of the individual components. In his opinion a drug for the relief of airsickness should prevent the condition without producing any other pharmacological effects. It should be active after oral administration and the onset of action should be immediate. The drug should not be toxic, habit forming or cause disagreeable symptoms. Although referring specifically to drugs for airsickness, it is evident that these standard apply to motion sickness preventives in general.

Considerable progress in the use of drugs, especially in the prevention of motion sickness, has been made during the last decade. The agents studied most extensively during the war were the belladonna alkaloids and the central nervous system depressants, such as the barbiturates. More recently, considerable attention has been focused on the antihistaminics and related compounds.

A large volume of evidence has been gathered which shows definitely that when administered one-half to four hours before exposure to motion, preparations containing one or more of the naturally occurring belladonna alkaloids are effective in reducing the sickness rates caused by mechanical devices, aircraft or ships.[2] According to Smith,[21] among the alkaloids of demonstrated effectiveness, atropine, hyoscyamine and hyoscine (scopolamine) are the most valuable. The doses employed most frequently are 1.0 mg. of atropine sulfate or of hyoscyamine hydrobromide or 0.65 to 0.75 mg. of hyoscine hydrobromide. He notes that the onset of action after oral administration is not very rapid, about one hour being required for an appreciable suppression of salivation—one of the prominent side-effects of this group of drugs. The actual duration of action of these agents is not known,

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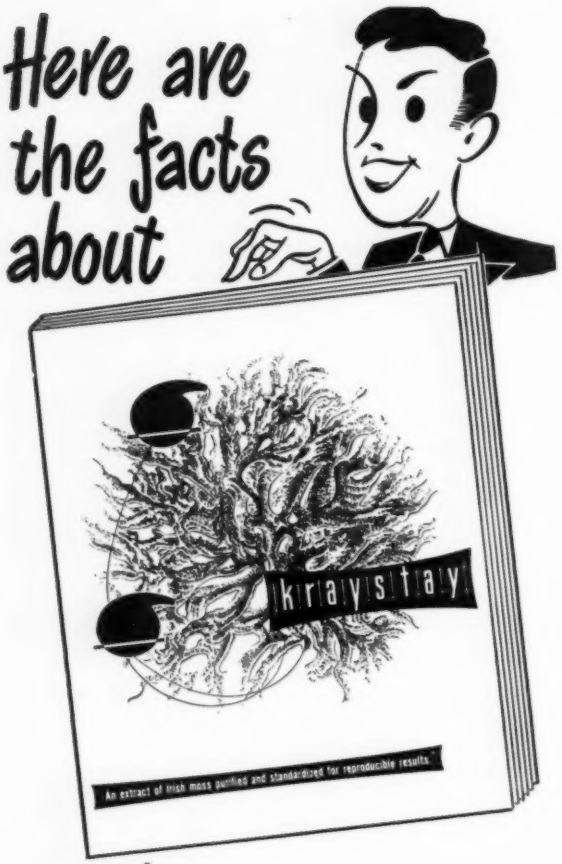

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but there is some evidence that the effectiveness lasts for approximately six hours.

Smith also points out that, on the basis of their effect on motion sickness alone, there is not much difference between the three alkaloids. It has been found, however, that the suppression of salivation and other side effects is much less with hyoscine than with atropine or hyoscyamine when they are all used in effective doses. As remarked by Lilienthal,[22] in contrast to atropine, hyoscine in therapeutic doses produces little or no mydriasis, cycloplegia, tachycardia or suppression of sweating and salivation. The pharmacological rationale for the use of hyoscine in motion sickness is based on its well recognized sedative and tranquilizing effects, but the actual mode of action is not known.

Studies made with thousands of individuals, most of them in the armed forces of the United States, Canada and Great Britain, have established the value of hyoscial as a weapon against motion sickness. In England, in studies with men on minesweepers or trawlers, Holling, McArdle and Trotter[23] found that when 0.6 mg. of hyoscine hydrobromide was administered only 20 per cent were seasick, whereas 46 per cent of the controls (given dummy tablets) became ill. Working with large numbers of men in various types of assault craft, Hill and Guest[24] found that of all the remedies tested, hyoscine proved to be the most effective. The degree of protection was of the order of four-fifths of those susceptible to seasickness.

Hyoscine appears to be as effective in preventing airsickness as it is in preventing seasickness.[16] Lilienthal,[22] for example, reported that, on 200 cadet flights, when 0.6 mg. of hyoscial was administered 30 to 60 minutes before flight, only one man became airsick—an attach rate of 0.5 per cent. In contrast, when no drug was administered on 531 cadet flights, 40 cadets became obviously airsick; others being an attack rate of 7.5 per cent.

As already indicated, hyoscial seldom causes unpleasant side-effects when given in standard doses.[21] Even with larger doses of 1.2 mg. Holling and his coworkers[23] stated that the only undesired effect was the occasional complaint that dryness of the mouth made chewing difficult. This effect can be avoided, if need be, by using scopolamine aminoxide hydrobromide.[8,13]

On the theory that an even wider margin of safety could be attained, combinations of belladonna alkaloids were also investigated. Among these products is the so-called "R.C.N. remedy" which was developed and tested by the Royal Canadian Navy Research Unit. At first the remedy contained 0.8 mg. hyoscyamine, 0.3 mg. hyoscine and 200 mg. niacin, but later the niacin was removed from the formula because it did not add to the protective action.[25] In their review, Tyler and Bard[2] state that the R.C.N. remedy has given consistently good results in tests on swings, at sea, and in the air. In the various trials from 47

to 73 per cent of the susceptibles were protected by this combination.

A proprietary product containing camphorates of hyoscine and of hyoscyamine was also tested during the war. Known commercially as "Vasano" (Schering Corp., Bloomfield, N. J.), this preparation gave an estimated protection ranging up to 72 per cent.[3]

Moderate sedation with a barbiturate is a recommended[11] procedure in cases of moderate exposure to motion and where maintenance of normal alertness is not required. However, as reported by Smith,[21] studies with both long-acting and short-acting barbiturates indicates that, with one or two possible exceptions, the use of these drugs in the treatment of motion sickness is not justified. From work done by Tyler,[26] Amytal (Eli Lilly & Co., Indianapolis, Ind.) may be one of the exception since it did afford improved protection as compared with a placebo. The thiobarbiturate, ethyl-beta-methylaleyl thiobarbituric acid, was also found to be a moderately effective preparation.[25-27] Given the designation, V-12, this drug is now available commercially as "Mosidal" (Abbott Laboratories, N. Chicago, Ill.).

On the theory that improved action would result, various combinations of barbiturates and belladonna alkaloids have been formulated and tested. One which received considerable attention during the war is known as Motion Sickness Preventive, Army Development Type; called briefly MPS. This remedy was dispensed in capsules each containing 65 mg. Amytal, 0.2 mg. hyoscine and 0.16 mg. atropine; the usual dose being two such capsules. With this preparation, Smith[25] obtained 52 per cent protection in air trials. The R.C.N. remedy yielded essentially the same protection, while hyoscine alone seemed more effective, yielding 67 per cent protection. Following a consideration of the evidence, Tyler and Bard come to the conclusion that MPS is an effective preventive of seasickness. Very recently, however, Wright[7] reported his disappointment in the results obtained with MPS. A fatality from overdosage, attributed to the amytal content of MPS, has been detailed by Foucar, Gordon and Kaye.[29]

Similarly, V-12 has also been tested for its value in combination with belladonna alkaloids. Tylers'[26] tests indicated that the addition of the barbiturate did not significantly enhance the protective action of the alkaloids. In contrast, Noble[30] obtained evidence that a combination of V-12 and hyoscine is more effective than either drug alone. Pertinent in this connection is the fact that the National Research Council of Canada has recommended the use of a capsule containing 0.1 mg. hyoscine, 0.3 mg. hyoscyamine and 130 Gm. of V-12. Known as the Canadian Motion Sickness Remedy, the dose is two capsules, two to four hours before exposure to motion.[25]

In his work on airsickness in bomber crews, Green[10] obtained good results with a preparation containing pentobarbital and atropine sulfate.

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suggestion for the treatment of motion sickness. This consists of the use of a chewing gum containing hyoscine hydrobromide and acetylsalicylic acid. This combination, he claims, affords a satisfactory therapeutic agent for the prophylaxis and treatment of the condition.

During the last year or so a great deal of interest has centered about a product known as Dramamine (G. D. Searle & Co., Chicago, Ill.). Chemically, it is beta-dimethylaminoethyl benzohydryl ether 8-chlorotheophyllinate. Pharmacologically it belongs to the class of antihistaminic drugs.

According to Gay and Carliner[32] its potentialities as a motion sickness remedy were suggested when a woman being treated for urticaria obtained relief from her attacks of car sickness. Further investigations were made by these workers, the most significant being those carried out on replacement troops during the trans-Atlantic passage of the U. S. Army Transport "Ballou." This ship, built originally for the Pacific, was chosen because its narrow, high construction promised a rough mid-winter Atlantic crossing with the likelihood of much seasickness. One group of men was given the drug as a preventive. They got a capsule as the ship left the harbor, six hours later and then before each meal and before retiring. Less than two per cent who got the preventive doses developed seasickness. Of those given the drug to cure seasickness after it had developed, all but three per cent got complete relief.

The methods used by Gay and Carliner have been criticised and some of their inferences have been disputed.[2,33,34] For example, Tyler[35] feels that no convincing evidence was presented to indicate that Dramamine is any more effective than hyoscine in preventing motion sickness. Others, however, have found Dramamine to be an effective drug. Thus, Wright[10] found that while Dramamine was not as effective as reported by the original investigation, it was "dramatic" in its alleviation of motion sickness; 91 per cent being relieved. In tests with aircraft crew members, Simon and Seyler[36] found that airsickness was well controlled by the drug.

While Gay and Carliner encountered no reaction to Dramamine, it was predicted by others[2,34] that, by the nature of the drug, undesired side effects would be noted. In line with this prediction is Wright's observation that 22 per cent of his Dramamine—treated patients complained of drowsiness. However, he found that the use of 2.5 mg. of amphetamine sulfate with each 100 mg. of Dramamine eliminated the side effect without diminishing its therapeutic value. The figures of Simon and Seyler with respect to drowsiness were higher; in the range of 50 per cent. It is interesting that these workers also suggested that amphetamine might possibly counteract the tendency to drowsiness. In view of such observations, it is understandable that the Civil Aeronautics Administration has "advised" commercial pilots that the drug may make them sleepy.[37]

Since Dramamine is a member of the antihistaminic

class of drugs, it should be expected that certain other compounds of this type might be similarly useful. This has proved to be true in the case of Benadryl (Parke, Davis & Co., Detroit, Mich.), which is designated as diphenhydramine hydrochloride. As is pointed out in an editorial note in Wright's report and as noted by Nickerson,[33] Benadryl and Dramamine are similar in structure.

In his comparative studies, Wright found that Benadryl was 88 per cent effective in relieving motion sickness. While no severe toxic symptoms resulted from this agent, drowsiness was noted in 58.2 per cent of those receiving the drug. Here, too, this side effect was eliminated or considerably diminished by the simultaneous administration of 2.5 mg. amphetamine with 50 mg. Benadryl.

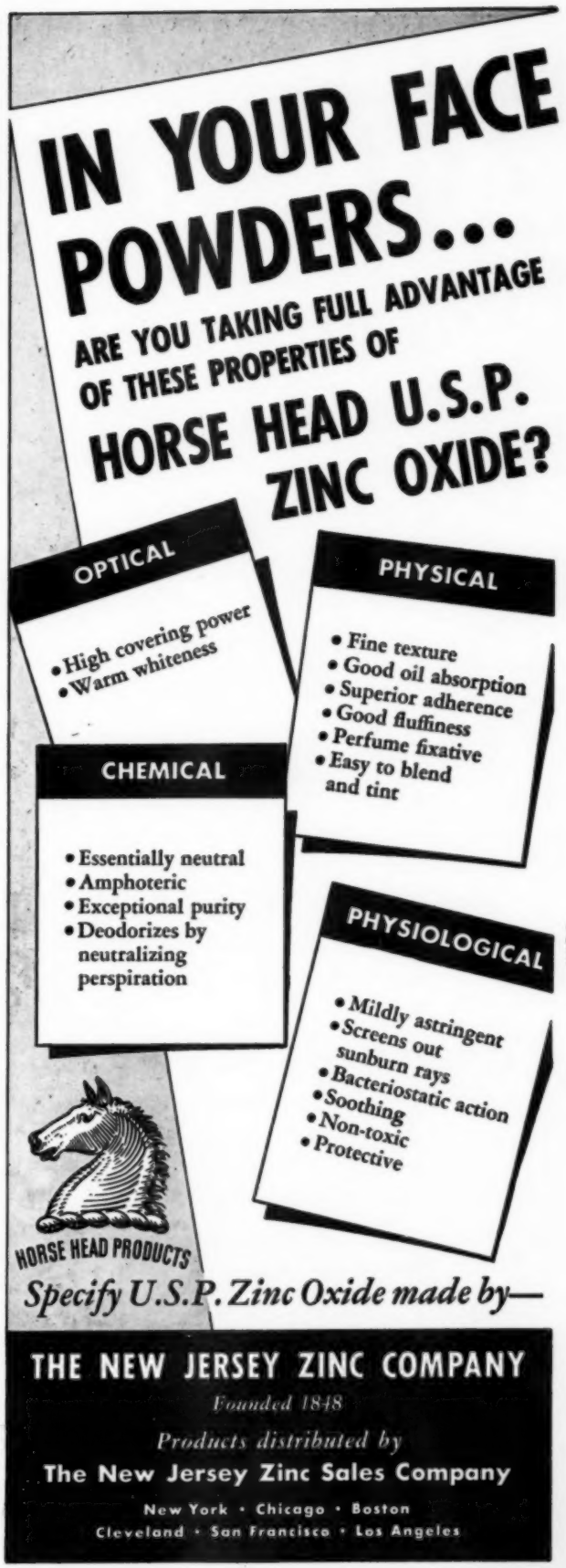
Very recently, Chinn and Oberst[38] reported that Benadryl and Dramamine in dosages of 50 and 100 mg., respectively, appear to be equally effective in preventing airsickness. They also found that 0.65 mg. of hyoscine hydrobromide and 50 mg. of Benadryl, given in combination, are more effective than either drug used alone.

Of course many other agents are being tried and used as remedies for motion sickness. For example, it is said[11] that amphetamine may sometimes prove useful to combat the depression often associated with motion sickness. According to Smith,[21] there is not sufficient evidence that the central nervous system stimulants, including amphetamine, ephedrine and desoxyephedrine, are effective remedies for motion sickness, either alone or when combined with other substances. He notes, however, that these drugs are usually employed in conjunction with central nervous system depressants in attempts to prevent undue depression without distracting from their efficacy against motion sickness. Wright's use of amphetamine, cited above, affords a typical example of such employment.

From time to time certain vitamins, notably members of the vitamin B complex, have been tried as agents against motion sickness. As was the case with niacin in the R.C.N. remedy, it is generally agreed[2,21] that vitamins are of little value in this connection.

Just arriving on the market is a new product for the prophylaxis and treatment of motion sickness. Chemically it is N, N-dimethyl-N′-a-pyridyl-N′-p-methoxybenzyl ethylene diamine 8-bromtheophyllinate. It is a comfort to know that this compound is to be known as pyrabrom. Reports of its investigation are now awaiting publication and the product is available under the trade-mark "Bromth" (Brayten Pharmaceutical Co., Chattanooga, Tenn.). One superiority claimed for this compound is the absence of sedative effect assoicated with other remedies.

In the meantime, the search for better remedies goes on. As remarked by Schwab,[39] despite the tremendous amount of work done with various compounds, there is still no formula that is absolutely effective,



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Odor and Olfaction

(*Continued from page 327*)

types of biological activity; if one of the steps is critical (rate-determining) the physico-chemical property involved will show a correlation with biological activity. Many attempts have been made to correlate physical and chemical properties of odorants with odor production; it is generally agreed that a certain minimum volatility and lipoid solubility are necessary, so that the odorant can reach a sensitive position on or in the olfactory cell; thereafter, ability to attach itself to protein (enzyme) may determine what odor impulse the odorant will produce.

Molecular Structure and Activity

What are the chemical or structural features which have been found to be connected with biological activity, and which should therefore be examined for connection with odor production? Sexton, in his recent monograph[12] on chemical constitution and biological activity, has collected extensive data, of which only the most pertinent can be mentioned here. In general, biological activity appears to depend upon interference with one or more vital processes by altering one or more enzymes. Substances such as heavy metals or quinones, which can react with a wide variety of enzymes, will inhibit many biochemical reactions and have general toxic effects. Other specifically acting substances inhibit one or only a few reactions; such

substances generally have a structural similarity to metabolites normally involved in these reactions.

Antagonists

Considering any natural metabolite, we can imagine structural changes so slight that the resulting compound will satisfactorily replace the metabolite in its normal reactions. Thus 2-chloro-4-aminobenzoic acts similarly to para-aminobenzoic acid. Slightly greater changes will produce compounds which inhibit the reaction of the natural compound; sulfanilamide and its derivatives thus inhibit the utilization of the structurally similar para-aminobenzoic acid. More radical changes produce inactive compounds. We can visualize the natural metabolite and its substitutes as possessing groupings which can attach their molecules to the corresponding enzyme, thereby opening other groups in their molecules to reaction and further utilization; the antagonist will be similar enough to become attached to the enzyme, but will be unable to enter into the reaction required for utilization; it will block the enzyme and prevent the metabolite from attaching and reacting; the grossly different inactive compound can neither attach itself to the enzyme nor react.

Having this picture of the mechanism whereby substances interfere with metabolic processes, can we determine what features of a molecule determine its biological effects? We have considerable evidence that certain features are strategic, but we have no comprehensive rule or theory. First of all, the importance of using three-dimensional models in all such work must be stressed. The biological inactivity of the optical antipodes of natural amino-acids should be proof enough of the importance of spatial arrangement in proteins. Bergmann and co-workers[13] have described how steric hindrance can result from shift of alkyl groups in synthetic dipeptides, and it is clear that slight changes in relative positions of strategic groups will spoil the close fit over a large area needed for some enzyme-substrate reactions. We are sadly handicapped in our attempts to think in terms of spatial configuration, by our habit of using two-dimensional formulas. The structural formula of pethidine, on paper, does not show much similarity to that of morphine, but the solid models disclose common features which may be connected with their similar physiological effects.[12]

Some students of olfactory phenomena have concluded that the shape of the entire molecule has a major bearing on odor production[14] and the same idea emerges in connection with other biological reactions. It is probable that the original metabolite molecule must be closely copied only with respect to the part that fits against the enzyme; other parts can differ, if they do not disturb this essential area. Roblin[15] concludes that effective antagonists are generally produced by making a single change in the metabolite molecule, and that simultaneous alteration of two groups is likely to give less potent or totally inactive antagonists. Dittmer[33] lists fifteen types of substitution which produced antagonists for various amino acids.

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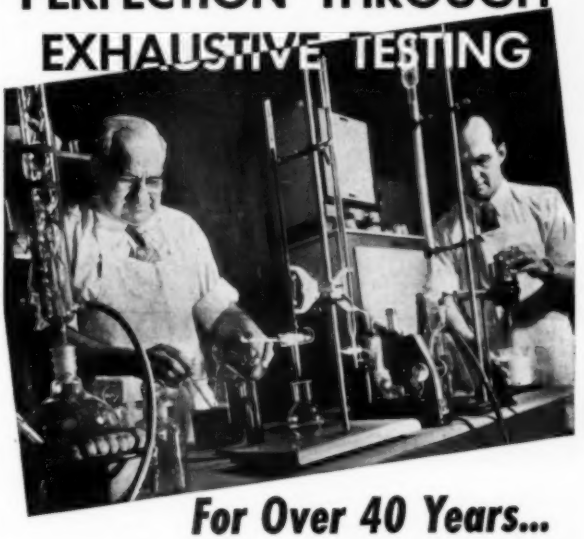

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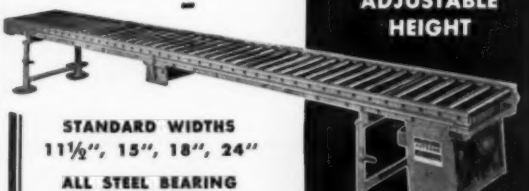

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Critical Spacings

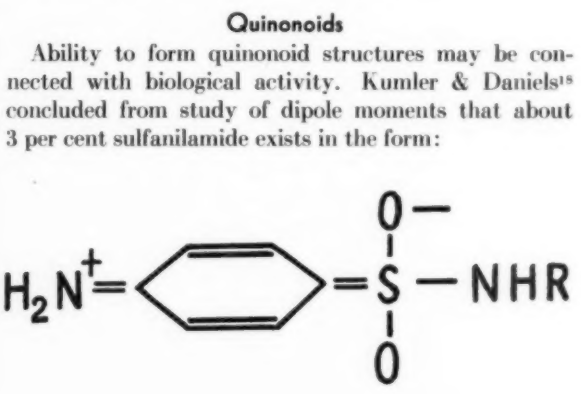
In some cases, activity can be correlated with distance between two active groups. The first paper in this series, which mentioned only briefly the possible role of enzymes in olfaction, also touched upon the significance of selected interatomic distances, and Moncrieff[14] includes the proper value of such spacings among requisites for odor production. Such critical distances are not necessarily those between the same atoms or groups in all compounds acting similarly, but are rather to be thought of as distances between certain electron patterns which can be produced by any one of several atoms or radicles. Bell and Roblin[15] point out the close similarity in certain dimensions of sulfanilamide and para-aminobenzoic acid. Schueler[17] suggests that estrogenic activity is connected with two H-bonding groups such as—OH, held 8.55 Angstroms apart by a rigid structure.

Unsaturation

Double bonds have been assigned a general strengthening influence both upon odor and upon other biological effects. Sexton[12] quotes these facts: (1) where stereochemical configuration is a factor, the double bond creates cis and trans isomers, one of which may be quite active; thus cis-cinnamic is a much more potent regulator of plant growth than phenylpropionic acid. (2) Unsaturation increases the narcotic effect of lower hydrocarbons. (3) Double bonds have more effect in activating a compound when reinforced by a neighboring active group such as ketone or lactone.

Quinonoids

Ability to form quinonoid structures may be connected with biological activity. Kumler & Daniels[18] concluded from study of dipole moments that about 3 per cent sulfanilamide exists in the form:



They believe this form, with a coplanar amino group, to be necessary for antibacterial activity.

Curd, Lundquist and Rose[22] find a connection between antimalarial activity and ability to produce resonance forms with a path of conjugated double bonds through alternate carbon and nitrogen atoms from one extra-nuclear nitrogen to another.

Conjugated systems, with their well known ability to resonate, may provide a means of transporting electrons over considerable distances. This concept will bear further examination as a possible key to the mechanism of production of nerve impulses, and specifically to that of the odor sensation.

Electron Patterns

The electronic constitution of the molecule may be used to predict effects of minor variations, even though fundamental causes of biological activity can not yet be calculated in such terms, due to the complexity of most molecules involved. Gabelein[19] has attempted to explain effects on sensory organs, as well as pharmacological action on nerve function, on the basis of valence deformation. Albert and coworkers[20] connect antibacterial action in several polycyclic series with a minimum flat area of about 28 square Angstroms. Pullman & Pullman[21] have reviewed the quantum-mechanical aspects of the electronic structure of organic chemicals showing biological activity.

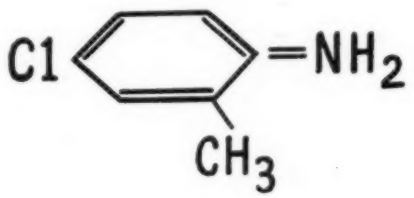
Odorants as Biochemical Reagents

Although we have stressed the importance of the structure of the entire molecule for biochemical reactions, it may be interesting to examine some of the chemical groupings commonly found in odorants, and to consider whether their biological effects may suggest analogous olfactory effects.

Alcohols are oxidized in animals to aldehydes or acids. Such oxidation could provide energy for transmission of nerve impulses. Esterases are believed to act by attaching the ester to their—OH group, so appropriately constituted carbinols might interfere with esterase action.

Aromatic Hydrocarbons and some Heterocycles are oxidized by introduction of hydroxyl groups, sometimes forming highly active quinones.

Methyl Groups are of great significance, not only in compounds where they are labile enough to enter transmethylation reactions, but also on account of their effect on general reactivity of the molecule. They may block reactions of nearby atoms by their shielding effect, or activate other atoms. Thus



is more toxic than its isomers because the para- and ortho-positions, where amines generally become hydroxylated in normal detoxification processes, are occupied. Mesitylene (symtrimethylbenzene) can couple with certain diazonium salts which do not react with xylene and lower homologs. A methyl group in a meso position converts 1:2-benzanthracene to a powerful carcinogen.[12] The methyl group's effect on odor production has already received much attention and further study in the light of the above data should be fruitful.

Phenols can combine with amino groups in proteins, and have a wide range of toxic effects. Peroxidase catalyzes the oxidation of certain phenols to quinones. Phenols can orient themselves to oil-water interfaces,

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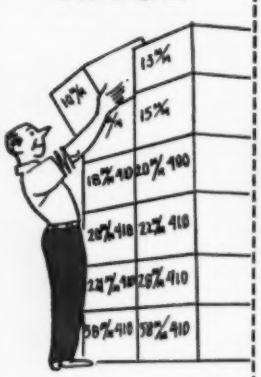

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and so perhaps interfere with vital processes. Substituents vary these activities, as they do the powerful odors of phenols.

Thiols are very active biochemically; their susceptibility to reversible oxidation to disulfides may enable them to interfere with natural oxidation-reduction systems. They may activate proteolytic enzymes by opening their disulfide links, and may inactivate metal-containing enzymes by combining with the metals. They can also react with unsaturated linkages such as those of α,β- unsaturated ketones, lactones or quinones. They are among the most powerful odorants known. Ethyl mercaptan, a very powerful odorant, suppresses the normal activity of compounds of the vitamin K group (naphthoquinones).

Ethers have polar properties, so can become oriented at lipoid-water interfaces, since the oxide O is hydrophilic and the alkyl groups are lipophilic. Their odorous properties are well known.

Halogens frequently increase the activity of biologically active compounds; their effect on odor is generally intensifying.

Amines can combine with acidic groups of proteins, so are suited for action on enzyme systems. Certain amines have a marked effect on the nervous system, and the simpler ones are well known for their powerful, fishy odors. Aromatic amines can be converted to quinonoid compounds.

Esters may play a special role in connection with cholinesterase, as described below.

Salicylates have outstanding bacteriostatic powers; they inhibit organisms which synthesize pantothenic acid. The lower esters of salicylic acid have distinctive odors, and further inquiry into Lipmann's report[23] that coenzyme A, active in acetylation processes, may be a pantothenic acid derivative, could shed interesting light on the means whereby salicylates produce odor.

Nitrobenzene and other lipoid-simulating substances were found to produce a negative potential in extremely dilute solutions of acetylcholine.[24] Nitrobenzene is of interest odorwise as a simple benzene derivative which has an odor similar to that of another simple benzene derivative, benzaldehyde; also to that of hydrocyanic acid. A study of structural similarities which may be connected with these odor similarities holds attractive possibilities.

Cinnamic Aldehyde is cited by Sexton[12] as an example of a fungistat with electron-attracting group capable of polarizing an adjacent double or triple bond. Its characteristic cinnamon odor, shared with the lower cinnimic acid esters possessing the same groups, may be explicable on a similar basis.

Arsenic Compounds, some of which possess powerful, disagreeable odors, may be toxic because of combination with vital thiol groups, or by interference with phosphorous analogs.

Heptaldehyde and Citral, well-known odorants, have some activity in inhibiting growth of tumors, possibly by combining with thiol groups in cellular enzymes, thereby inactivating carcinogens.

How Do Odorants Activate Olfactory Cells?

Given the above extremely diverse data on biological activity of chemical substances in general and of odorants in particular, can we suggest any biochemical reaction or system as especially suitable for study in connection with odor production? The synthesis, modes of action, and breakdown of acetylcholine appears to be of great interest for our purpose.

Nerve Action

The structure of the olfactory cells and their appurtenances is well described by Moncrieff in his comprehensive monograph, The Chemical Senses.[25] The recent success of Rozsa, Morgan, Szent-Gyorgyi and Wyckoff[26] in obtaining electron micrographs of nerve fibers presages a more detailed knowledge of the fine structure of nerves. Further clarification of the role of acetylcholine may also be confidently expected, but it has been credited with an important part in nerve activity. Nachmansohn[27] considers it highly probable that the release and removal of acetylcholine in the nerve cell is directly associated with the nerve action potential, possibly by breaking down membrane resistance during passage of the impulse. If this is true, any odorant that can influence the rate of synthesis, the activity, or the destruction of acetylcholine in the olfactory cells could therby produce a nerve impulse which would be registered in the brain as an odor sensation.

Acetylcholine

Acetylcholine is formed in various tissues (e.g. brain tissue) from choline and such products of carbohydrate metabolism as pyruvate, lactate, glutamate or acetoacetate. The existance of an enzyme, choline acetylase, was postulated, and Nachmansohn and coworkers[28] found that l-glutamic acid, succinic acid, alanine and methionine accelerated the synthesis of acetylcholine. Nachmansohn[29] proposed an "acetylcholine cycle" to account for the energy needed for the synthesis; this cycle includes dephosphorylation of adenosine triphosphate, rephosphorylation by creatine, carbohydrate breakdown to furnish pyruvate and hence acetyl groups, acetlyation of choline, and transmethylation between creatine and choline. Here is a series of varied biochemical reactions; if each is vital in the production of acetylcholine, any odorant which could interfere in any step could affect acetylcholine synthesis and thereby create nerve impulses.

Acetylcholine exhibits several modes of action, each of which is simulated by a distinct group of substances. Nicotine imitates the action of acetylcholine on ganglia, and curare blocks this type of action. Muscarine simulates the action of acetylcholine on effector organs, and this type of action is blocked by atropine and its derivatives.

Cholinesterase

The enzyme which promotes hydrolysis of acetylcholine, cholinesterase, is inhibited by eserine; therefore

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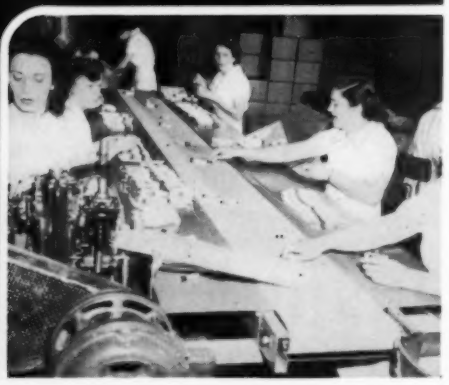

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addition of eserine to a tissue will allow acetylcholine to accumulate. Stedman & Stedman[30] considered that the urethane grouping of eserine and of the similarly active prostigmine was responsible for the inhibition, its ester nature permitting it to compete with the acetylcholine for points of attachment to the esterase. (Possibly other esters could compete similarly, including some odorous ones.) It is therefore conceivable that odorants might produce nerve impulses by interference with any of the steps in the synthesis of acetylcholine, or by antagonizing the actions characteristic of nicotine, muscarine, curare, atropine or eserine.

Phase Boundary Potentials

Barnes & Beutner[31] have shown that acetylcholine, in a concentration of one part in several million, can produce a negative potential at the interface between saline and lipoid solutions (analogous to the nerve cell surface). They consider that quaternary ammonium compounds generate negative electricity at the cell surface by ionizing, and that biological effect depends on lipoid solubility and degree of ionization in lipoid. They assume that the entire surface of the cellular membrane is covered by a continuous layer of the drug molecules. Welsh[32] however finds that among twelve acetylcholine derivatives, the strongest muscarine effect was given by 4-keto-amyl trimethylammonium chloride, the one most resembling acetylcholine in molecular shape; this brings us back to the idea of any active substance fitting into a protein molecule (enzyme) and the necessity of imitating steric features in order to produce similar biological effects.

It is of course possible that odorants may influence acetylcholine or some other cell constituent to produce a nerve impulse, without the intervention of protein (enzyme), Beutner and Barnes[24] were able to obtain phase boundary potentials of 5 mv. with one part of acetylcholine in one hundred million, in contact with nitrobenzene plus 0.1 per cent sodium benzoate. It would be interesting to study the phase boundary potentials produced by actylcholine solutions in contact with a large number of odorants, and to examine the results for any possible correlation between odor type and potential produced. However, it is difficult to visualize a mechanism whereby the highly diverse odors we recognize could depend on different values of one parameter-potential. It appears more reasonable to expect such a variety of sensations to be referable to the highly specific enzymes, with their ability to utilize forces insufficient for gross chemical reactions, but dependent on spatial configuration, as odor also appears to be.

Summary

The mechanism of olfaction, and the correlation of odor with chemical structure remain largely unexplored. But the study of mechanisms of other biological effects, permitting their explanation in terms of bio-

chemical reactions, has disclosed analogous points where the mysteries of olfaction may yield to a sustained attack based on modern chemical methods.

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Drugs in the British Plan

(Continued from page 329)

drugs of doubtful value), we have no reason for suggesting on medical grounds that these proprietary preparations should not be freely prescribable in the National Health Service, except when advertised direct to the public. The objection to many of them is that a standard drug of reputed analogous therapeutic effect can be prescribed at less cost, but we do not feel that we are a competent body to advise on this question of cost."

The Committee recommend: **that proprietary preparations in category (1) should be freely prescribable, and that preparations in categories (2), (3) and (4), which they regard as not therapeutically superior to standard preparations, should be prescribable subject to (i) their not being designated as foods, toilet preparations, or not drugs for N.H.S. purposes by the Definition of Drugs Joint Sub-Committee, (ii) their not being advertised direct to the public, and (iii) satisfactory arrangements for price being made between the Health Departments and the manufacturers.**

The Committee concludes the report with the statement that it is willing, if the Councils desire, to continue its work in classifying such proprietary preparations as are referred to the Committee into the above six categories. The task would be a huge one since there are many thousands of these preparations and a therapeutic evaluation involves the collection of all relevant information so that a study can be made of each preparation individually.

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with an accompanying letter from Sir John Charles, Chief Medical Officer of the Ministry. The letter, which invites by friendly cooperation the help of general practitioners to avoid any expenditure which is unnecessary for proper treatment of patients, goes on to say:

"You are probably aware of the fact that rather more than 50 per cent of the cost of medicines supplied to public patients is for proprietary preparations. Of course, it would be wrong to condemn proprietary preparations as a whole, indeed, some of them are of great value in the treatment of patients and have no standard equivalent. There can be no question of asking practitioners not to prescribe proprietary preparations known to be of proved value and for which there is no equivalent substitute.

"There are, however, some proprietary preparations for which there are standard equivalents in the Pharmacopoeia, B.P.C., or the National Formulary and which are more expensive than the standard preparation. It is in this field that substantial economies could be made without affecting in any way the efficacy of treatment. None of us want the Health Service to cost more than is necessary, and there is reason to believe that a substantial saving could be effected if practitioners would prescribe the standard preparation, wherever it is equivalent to the proprietary.

"The formal suggestion I want to make is that, save in any exceptional case where there is an over-riding medical consideration, doctors will seriously consider before ordering one of these proprietary preparations, whether the alternative standard drug could not be ordered without detriment to the patient's condition. It will be appreciated that, in many cases, preparations in this group are advertised direct to the public.

"The Departments would greatly value the help of the medical profession, while preserving their right to do what they believe to be best in the interests of the patient, in prescribing a standard preparation, where there is such a preparation, and so avoiding unnecessarily expensive prescribing."

A letter on economy in prescribing was also sent to hospital medical staffs.

The Association of British Pharmaceutical Industry is quite concerned regarding the effect of the Cohen Report on the British export trade, says the Pharmaceutical Journal (London), which reports on a discussion of the report by the Association:

"In the export trade considerable goodwill is attached to branded products; it is feared that the reports will be regarded as an indictment of British branded products and that repercussions abroad can hardly be favorable to us. On the question of cheapness, it is claimed that all real advances in pharmaceutical chemistry and pharmaceutics have come from the research laboratories of the pharmaceutical manufacturers; the general expenditure involved has naturally resulted in a relatively high price for the product of research. Is not this research activity and technical control entitled to a reasonable premium on the standard drug produced in

a more modest background?, asked the committee. There is nothing in the report which implies criticism of any drug, whether or not it is advertised to the public. Public advertising inevitably creates a demand by the patient for a particular product, whereas a product should be prescribed on the doctor's initiative.

"In the course of the discussion a number of miscellaneous points were made: there is an underlying feeling that the Government desires us to use "utility' drugs in the Health Service; the total expenditure on 'ethical' proprietary medicines (–8 m.) has been only two per cent of the total cost of the Health Service and this amount might more easily have been saved in other departments; the active discouragement of the prescribing of 'ethical' proprietary products will have an adverse effect on pharmaceutical industry and will be a bad thing for the country as a whole; eventually we shall have to rely on America and Switzerland for new drugs."

"While recognizing that publicly advertised medicines may not be essentially different in character from those which are 'ethically' advertised," says the Pharmaceutical Journal editorially, "the Committee has taken the view that, because advertising to the public has the effect of detracting from the responsibility which should rest solely on the prescriber, medicines so advertised should not be freely available under the Service. Few pharmacists will dissent from this view, and it is difficult to see how the commercial interests behind the publicly advertised proprietary can logically complain of the Committee's attitude, which, no doubt, is inspired by the desire to protect doctors from the demands of patients for widely advertised remedies as by the need to achieve economies. Nor are these interests seriously threatened by the Committee's recommendations since the sale of publicly advertised proprietaries through the Health Service (probably not exceeding in value £1 million) represents a very small proportion of total sales in the home market alone; it is also likely that the majority of patients who are refused supplies of these proprietaries on E.C.10 forms will purchase them, so that sales may not diminish to any appreciable extent. It is the manufacturers of 'ethical' proprietaries who have the greater cause to be alarmed by the Committee's recommendations, which, it should be noted, have been accepted by the Health Department which is proceeding to put them into effect.

"As a first step, a copy of the report, together with an accompanying letter has been sent to every doctor in the Service. Although moderate in its appeal for friendly cooperation and giving due recognition to the fact that not all proprietaries are capable of being substituted by standard drugs, the effect of the letter, as of the report, must be prejudicial to the interests of manufacturers of 'ethical' proprietaries in general. While the letter repeats the disavowal made in the report of any intention to place absolute restrictions upon the doctor's freedom to prescribe, it is implicit in the report that the restrictions are to be imposed sooner or later. Thus, the doctor who orders a publicly advertised proprietary, or a preparation con-

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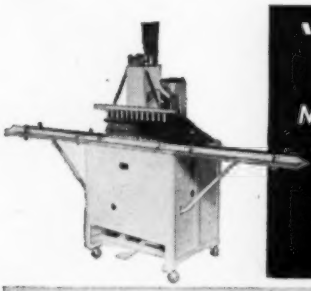

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sisting of, or containing a drug 'of doubtful value' or an 'ethical' proprietary of which the price is not acceptable to the Health Departments, may be required to justify his action, and, if unable to do so, he may be told to pay for the drug out of his own pocket. The issue of the letter may, therefore, be regarded as an interim step pending the preparation of a list of proprietaries subject to control.

"The preparation of a list of publicly advertised proprietaries should not present undue difficulty, although there may be unsuspected problems in arriving at a suitable definition of "public advertising.' Is it intended, for example, to rule out the display of show cards in the window of a pharmacy? Before a list of acceptable or non-acceptable proprietaries can be compiled, however, it will be necessary to decide which drugs are 'of doubtful value' and to investigate the prices of thousands of preparations. This will be a formidable task and it may well be that the Health Departments will proceed gradually by adding to a list of publicly advertised proprietaries those 'ethicals' for which substitutes of equivalent value are available at considerably less cost. Whatever form subsequent action may take, it seems inevitable that those 'ethical' proprietaries which are merely elegant variations or combinations of standard drugs and whose sale is dependent upon expensive 'detailing' instead of upon any marked superiority over the 'reputed analogous equivalent' will either disappear from the market or will emerge as publicly advertised proprietaries. This tendency will be welcomed both by pharmacists, for they have long suffered from an unnecessary multiplication of 'ethical' proprietaries, and by doctors, whose time is taken up by the calls of representatives."

"The net effect upon the pharmacist's remuneration of positive action to curtail the prescribing or reduce the price of proprietaries cannot, however, be foreseen with any exactitude. The elimination of products in uneven demand and the higher dispensing fees earned on non-proprietaries will represent a gain, whereas on-cost payments, whether based on Drug Tariff prices or upon a wholesale value for proprietaries which has been depressed by Ministry action, will be lowered. With reg rd to the reaction of the general medical practitioner, he may see in this move for economy a brighter prospect of improving his own financial position under the Service, and he may not, at first, object to the disciplinary measures advocated by the Committee, particularly as they will afford him some measure of protection against unreasonable demands by his patients. But whether the doctor will, in the long run, take kindly to an enforced change in the prescribing habits and to further encroachments upon his professional freedom, remains to be seen. Thirdly, the patients—those who are diverted from proprietaries to standard preparations—will be inclined to doubt whether they are receiving the best possible treatment and may come to regard the Health Service with suspicion. There may, indeed, be an increase in self-medication, and, correspondingly, in over-the-counter sales of proprietary and other medicines.

This tendency could, perhaps, be countered by improvements in the formulation and presentation of standard preparations, particularly those of the National Formulary, although such a move might be resisted on the grounds of expense. The effective implementation of the Committee's report may restore to some extent the position of the pharmacist as a compounder of medicines as distinct from a purveyor of proprietaries.

"It will be recognized, however, that, desirable as is the prospect of reducing the size of the drug bill, it will be no less disastrous if, in order to save one or two million pounds a year on 'ethical' proprietaries, obstructions are placed in the way of progress and achievement by the pharmaceutical industry. The incentive to research and development by commercial concerns lies in the prospect of recouping heavy expenditures by the sale of the resulting products at an adequately remunerative price, and some degree of monopoly such as is secured by a brand name is found to be essential. It is not always practicable, however, to recover the research costs in the price of successful products of research, particularly when an original discovery becomes a standard drug which may be manufactured or elaborated in its presentation by a competing firm. In such cases the manufacturer depends upon the sale of other branded products to make up the deficiency, and, by virtue of the reputation for quality and reliability which attaches to them, he is able to command a higher price than that ruling for comparable standard drugs."

The Hoarding Problem

(*Continued from page 325*)

But as is generally the case of those who try to figure every angle in a situation such as exists today, a great many of those who attempt to hoard will wind up in grief for one reason or another. Poor quality, deterioration and other dangers in storage, possibility of Government action which will prevent them from consuming the goods or which will commandeer them,—these are just of a few of the things that threaten the hoarder and make his sweat, activity, and investment of large sums of money subject to possible uselessness.

Pharmaceutical Sampling

(*Continued from page 337*)

should have adequate sample material. Medical, advertising and sales efforts in behalf of the new product should be well coordinated.

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With a mass-market, over-the-counter item, repeated sampling of facsimile packages to the physician by way of direct mail and through the detail representatives, particularly during the initial marketing phase, is suggested. Consumer, as well as physician recognition of the package is aimed at.

The supplying of "Clinical Samples" is another phase of sampling of a new product which warrants comment. This practice is obviously of maximum benefit to place supplies of selected new specialties in strategically located and recognized medical centers for use throughout the institution and particularly for clinical trial in the outpatient departments and in the wards.

Such controlled clinical trials are best instituted through contacts made by our medical staff both prior to and following the introduction of the new product. Clinical samples are furnished in adequate amounts as needed. As we all know, in many instances recorded clinical findings are reported at medical meetings or appear in medical journals. Such publications influence, to a major degree, the national recognition and usage of a drug, which has received planned clinical investigation. Also, the favorable relationship, both professional and business, between institution and manufacturer is enhanced as a result of such collaboration.

The competent professional service representative, can be a decided asset in this initial phase of sampling. Through his efforts and through his contacts with chiefs of staff, he can, through the judicious placement of clinical material, initiate the use of the new product in outpatient clinics.

Although not under controlled study, an increased use of the product in the institution and in the private practices of staff members can be anticipated. In many cases, such operations eventuate into controlled clinical investigation which terminate in published papers.

Any discussion of sampling invariably brings into focus the misuse of samples by a certain segment of the profession, which emphasizes very strongly the need for internal control of all allocated sample material. In considering this known abuse which is certainly disturbing, it can be pointed out if the preparation has any sedative effect, such misuse of samples and also

the cost of sampling in the export trade is in far greater proportion than is encountered in our own country.

Once a drug has become established, the cost of sampling should determine whether or not it should be sent out on a solicited or unsolicited basis. When we consider sampling, we must think not only of costs but also of potentials and profits and govern our actions accordingly.

Curbing Multiple Seizures

(*Continued from page 323*)

cause to believe from facts found without hearing that the labeling of an allegedly misbranded article is fraudulent or in a material respect misleading. Over-zealous, erroneous or even misguided administrative action in authorizing widespread multiple seizures on the claim of fraudulent or misleading labeling has and could result in irreparable damage and injury to shippers and producers. The attendant adverse publicity has often shattered the morale of a highly developed distribution system and destroyed customer good will developed through years of honest business practices. The fact that a shipper or producer ultimately prevails in a trial on the merits will not serve to resurrect what has become in effect a lifeless enterprise. The difficulty and expense of filing claims of ownership, answers and bonds in widely separated jurisdictions and in arranging for consolidation and removal may be enormous. Even after consolidation and removal further seizures may be filed for there is nothing in the law to prevent it. No Federal statute or theory of jurisprudence authorizes suit to recover damages caused by baseless multiple seizures. A moral victory is poor compensation at best. Furthermore, the Supreme Court of the United States has recently held that a shipper or producer does not have the right to seek injunctive relief against widespread multiple seizures even though there has been a gross abuse of discretion by officers of the Government in instituting multiple seizures based upon a claim of misleading labeling."

The text of Mr. Doyle's proposed amendment is hereby given with material to be depleted from the present law given in brackets, and material to be added to the law in italics.

The first part of Section 304 (a) provides, in substance, for multiple seizures of a product if it is adulterated or the misbranding has been the basis for a prior judgment in favor of the Government, "or libel for condemnation proceeding under this Act, or (2) when the Administrator has probable cause to believe from facts found, without hearing, by him or any officer or employee of the Agency that the misbranded article is dangerous to health [or that the labeling of the misbranded article is fraudulent, or would be in a material respect misleading to the injury or damage of the purchaser or consumer.] In any case where the number of libel for condemnation proceedings is limited as above provided the proceeding pending or instituted

(*Continued on page 426*)

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Patent Thoughts and Trends

(*Continued from page 381*)

U. S. 2,196,150—issued April 2, 1940 to R. F. Heald and R. J. Mehaffey, assigned to Colgate-Palmolive-Peet Co.

The idea behind this patent is to produce tooth powders or dentifrices which are free flowing and have little or no tendency to form large lumps. The patented compositions are in the form of granules or small agglomerates which do not break down in the ordinary handling but when they come in contact with water or saliva they break down into fine particles.

The new dentifrices are made by drying slurries containing the polishing agents, a suitable detergent, and a small amount of binder, and grinding the dried product.

Claim 2 is typical:

A dentifrice in the form of small, discrete granules, comprising a major proportion of an extremely finely divided polishing agent agglomerated in the form of granules by the use of a binder, said dentifrice also containing a detergent and other conventional dentifrice ingredients, said granules being of a size that substantially all pass a 40 mesh screen and are retained on a 100 mesh screen, said granules disintegrating instantaneously upon contact with aqueous media, but having sufficient strength to permit incorporation of flavoring materials and ordinary handling without disintegrating.

U. S. 2,196,154—issued April 2, 1940 to Albert L. Schulerud, assigned to Colgate-Palmolive-Peet Co.

This patent is directed to the same problem as that tackled by U. S. 2,196,-150. In U. S. 2,196,154 the tooth powders are produced in the form of hollow bodies or beads of globular shape.

Claim 1 gives an idea of the protection:

A dentifrice or tooth powder in the form of small, discrete hollow bodies or beads of a generally globular or spherical shape, said product consisting of a major proportion of an extremely finely divided polishing agent together with a detergent and other conventional dentifrice ingredients, the size of such small, discrete bodies or beads being such that substantially all are retained on a 200 mesh screen and substantially all pass a 40 mesh screen, said product being of a free flowing nature and said bodies or beads disintegrating immediately upon contact with aqueous media.

U. S. 2,201,098—issued May 14, 1940 to Orville E. McKim.

Claim 1 gives an idea of the disclosure as well as the protection:

A liquid preparation for cleaning removable dentures containing citric acid and isopropyl alcohol and having sufficient acid reaction in combination with the isopropyl alcohol to penetrate and dissolve the mucin plaques on said dentures.

U. S. 2,207,074—issued July 9, 1940 to Nathan Smith.

This is still another patent which attempts to utilize the advantages of sodium perborate and overcome its disadvantages. Acid reacting aluminum sulfate is combined with the perborates.

Claim 5 is illustrative:

A dentifrice capable of generating oxygen, which consists of sodium perborate monohydrate about 20 parts, in conjunction with dry sodium aluminum sulfate about 12 parts, said composition being in dry form, stable, and dissolving readily in water yielding a solution having a pH value of about 6.3.

U. S. 2,211,369—issued Aug. 13, 1940 to Charles B. Durgin, assigned to Monsanto Chemical Co.

Magnesium pyrophosphate is suggested as a polishing and cleansing agent in dentifrices.

Claim 1 indicates the protection:

A dentifrice base comprising finely divided, insoluble magnesium pyrophosphate.

U. S. 2,216,816—issued Oct. 8, 1940 to Rudolph A. Kuever, assigned to The Pepsodent Co.

This is an improvement on U. S. 2,019,142. The combination of insoluble sodium metaphosphate and a calcium salt is said to give better results than the individual components give when used separately, as well as having other advantages such as preventing syneresis (bleeding).

Claim 1 is typical:

A dentifrice composition containing insoluble sodium metaphosphate and tricalcium phosphate reduced to fine particles so as to act as a polishing and cleansing agent.

U. S. 2,216,821—issued Oct. 8, 1940 to Homer D. Long, assigned to The Pepsodent Co.

While the use of insoluble sodium metaphosphate as a polishing agent results in syneresis the incorporation of a magnesium salt will lessen this condition, as well as increasing the "slipping" characteristics of the material.

Not all magnesium salts do the trick.

Claim 1 indicates those which do as well as the general scope of protection:

A dentifrice composition consisting predominantly of insoluble sodium metaphosphate and including a suitable percentage as from 1 per cent to 7 per cent of magnesium compound chosen from the group consisting of magnesium oxide, magnesium hydroxide, magnesium carbonate, alkaline magnesium silicate, trimagnesium phosphate, and mono-magnesium phosphate.

U. S. 2,218,172—issued Oct. 15, 1940 to Vaman R. Kokatnur, assigned to Autoxygen Inc.

Claim 5 gives an idea of the disclosure and protection:

A composition for antisepsis of the oral cavity capable of being prepared in the form of a paste, powder, liquid or chewing gum, said composition being of substantial alkaline character and including as the active antiseptic agent an organic peroxidic compound and also including a substance which is a mutual solvent of saliva and of the peroxidic compound whereby to facilitate liberation of nascent active oxygen in direct contact with the pathogenic organisms to be destroyed, said mutual solvent being on organic hydroxy compound selected from the group consisting of ethyl alcohol and glycerol.

U. S. 2,222,969—issued Nov. 26, 1940 to Samuel S. Kistler, assigned to Monsanto Chemical Co.

The use of aerogels in conjunction with the usual polishing agents is disclosed broadly. However, this patent does not broadly cover this disclosure, as indicated by claim 1:

A dentifrice comprising an aerogel and dicalcium phosphate.

U. S. 2,225,284—issued Dec. 17, 1940 to William M. McDonald.

A composition for use in the treatment of mouth conditions such as gingivitis, pyorrhoea and trench mouth is disclosed. The composition contains an oxidizing agent, a substantially non-oxidizable oil (Nujol) and a surface active material such as "auramine," which is a diphenyl methane dyestuff.

Claim 1 follows:

An oral prophylactic comprising a mixture of an inorganic oxidizing agent in solid form, selected from the group comprising sodium perborate and magnesium peroxide, a substantially non-oxidizable oil, and a harmless reagent of the diphenylmethane dyestuff series having the property of increasing the surface tension of the oil to increase its capillary penetration, which reagent has the formula.

U. S. 2,236,828—issued April 1, 1941 to Fred W. Muncie, assigned to Colgate-Palmolive-Peet Co.

The reaction products of fatty oils, glycerine and sulfuric acid are disclosed as being new detergents useful in making dental creams etc.

Claim 1 gives an idea of the composition as well as coverage:

A dental cream comprising:

Detergent	about 1.2	parts	by	weight
Water	about 14.2	"	"	"
Glycerine	about 28.2	"	"	"
Calcium carbonate	about 45.7	"	"	"
Starch	about 7.0	"	"	"
Sodium benzoate	about 2.2	"	"	"
Flavoring material	about 1.3	"	"	"

The detergent being the sodium salt of the sulphuric acid ester of a fatty acid monoglyceride.

U. S. 2,317,297—issued April 20, 1943 to Allen L. Omohundro and Emil C. Fanto, assigned to McKesson & Robbins, Inc.

The sodium perborate problem is tackled again; this time it being suggested that boric acid in the presence of certain solid members of the polyhydric alcohol series, such as mannitols, sorbitols, etc. be used.

Claim 1 is illustrative:

A dentifrice comprising an oxygen-supplying component chosen from the group consisting of peroxides, percarbonates, perborates of the alkali and alkaline earth metals and a complex compound containing hydrogen peroxide with salts of the alkali or alkaline earth metals which reacts with the water present during dentifrice use to liberate oxygen with the formation of an alkali; boric acid, and a solid straight chain hexahydric alcohol which will combine with the boric acid in the presence of the water present during dentifrice use to form a reagent of substantially greater acidity than the boric acid, the boric acid and alcohol being present in proportions appropriate to produce a predetermined alkalinity in the products of reaction of the reagent with said alkali.

U. S. 2,343,651—issued March 7, 1944 to George T. Fielding.

In the words of this patent it discloses a cleaning medium which is "unique as a dentifrice." That this is not an exaggeration is believed to be clear when one learns that the cleaning medium has as its essential ingredient particles of hard wood formed by slicing or cutting wood stock across its grain, opposite faces of such particles lying substantially in parallel planes.

Novelty certainly seems to be present in this case.

Claim 1 is illustrative:

A cleaning and polishing medium containing hard wood particles, the dimension of the major portion of which across the grain is greater than that with the grain the faces of the major portion of the particles across the grain lying in substantially parallel planes, a face with the grain joining a face across the grain at an abrupt angle forming a scraping edge.

U. S. 2,359,326—issued Oct. 3, 1944 to Henry V. Moss and Theodore W. Schilb, assigned to Monsanto Chemical Co.

This patent deals with a dentifrice base which is said to have improved flowability, cleansing properties and to be a tasteless wetting agent.

Claim 4 indicates the solution:

As a free-flowing dentifrice base, dry granules composed of finely divided particles of a dentifrice polishing agent and a wetting agent comprising lauryl sulfate, said wetting agent binding said particles together in said granules.

U. S. 2,470,906—issued May 24, 1949 to Ralph Taylor.

This patent involves the teaching that ascorbic acid and dehydro-ascorbic acid and the acid analogues of ascorbic acids such as d-glyco -ascorbic acids and d-galacto ascorbic acids have the property of transforming the physical characteristics of the mucinous coat on teeth to an extent that facilitates the easy removal thereof by mechanical action.

Claim 1 is illustrative:

A dentifrice comprising in combination a bodying agent and more than .5 per cent by weight of an active medium, adapted to transform mucinous coatings in the oral cavity into easily removable form, from the class consisting of ascorbic acid and acid analogues of ascorbic acid, the bodying agent being present in amount sufficient to render the dentifrice of paste consistency.

RECENT PATENTS

2,504,471—National Drug—Sulfanilic Acid Derivatives.

2,504,612—Pierce Lab.—Podocarpinol.

2,504,633—O. H. Bloom—Synthetic Estromimetic agents.

2,504,977—Givaudan—Chloroethyl Dibenzyl Quaternary Ammonium Compound—An adrenolytic and sympatholytic Agent.

2,505,059—Baker Chemical Co.—Morpholine Salt of 2,4-D.

2,505,634—Sterling Drug—4-Pyridone-N-Carboxylic Acids.

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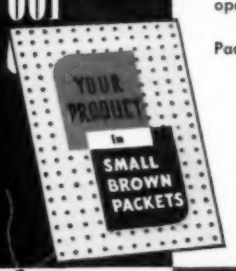

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Curbing Multiple Seizures

(Continued from page 423)

shall, on application of the claimant, seasonably made, be removed for trial to any district agreed upon by stipulation between the parties, [or, in case of failure to so stipulate within a reasonable time, the claimant may apply to the court of the district in which the seizure has been made, and such court (after giving the United States attorney for such district reasonable notice and opportunity to be heard) shall by order, unless good cause to the contrary is shown, specify a district of reasonable proximity to the claimant's principal place of business to which the case shall be removed for trial]. *Or, if no such stipulation be filed within a reasonable time, the court, on motion for the convenience of parties and witnesses, in the interest of justice, may transfer the case for trial to any other district or division thereof.*

"(b) The article shall be liable to seizure by process pursuant to the libel, and the procedure in cases under this section shall conform, as nearly as may be, to the procedure in admiralty; except that on demand of either party any issue of fact joined in any such case shall be tried by jury. *Cases brought hereunder shall be entitled to preference on the trial calendar.* When libel for condemnation proceedings under this section, involving the same claimant and the same issues of adulteration, or misbranding, are pending in two or more jurisdictions, such pending proceedings, upon application of the claimant seasonably made to the court of one such jurisdiction, shall be consolidated for trial by order of such court, and tried in (1) any district selected by the claimant where one of such proceedings is pending; or (2) a district agreed upon by stipulation between the parties. If no order for consolidation is so made within a reasonable time, the claimant may apply to the court of one such jurisdiction, and such court [after giving the United States attorney for such district reasonable notice and opportunity to be heard) shall by order, unless good cause to the contrary is shown, specify a district of reasonable proximity to the claimant's principal place of business, in which all such pending proceedings shall be consolidated for trial and tried]. *On motion, for the convenience of parties and witnesses, in the interest of justice, may transfer the consolidated proceedings for trial to any other district or division thereof.* Such order of consolidation shall not apply so as to require the removal of any case the date for trial of which has been fixed. The court granting such order shall give prompt notification thereof to the other courts having jurisdiction of the cases covered thereby."

Shaving Aids

(Continued from page 335)

Of lesser importance as an after shaving aid is the styptic pencil. Its function is to stop the flow of blood from accidental cuts and it depends on the presence of an haemostatic agent in order to perform adequately. These agencies may be chosen from a long list of avail-

able materials, with aluminum chloride leading the list. They are capable of precipitating proteins on contact and therefore clog the opening from which the blood flows. The haemostatic salts are present in these preparations in rather a high concentration in order to permit fast blood clotting and therefore are inclined to sting the point of contact to a rather high degree. The market for them is relatively small because a single pencil is capable of lasting over a period of several usings—since its use is haphazard and it is not, therefore, much of a factor in the shaving preparations market.

Management Forum

(Continued from page 373)

Stokesfeed

Stokes and Smith Company, Philadelphia, subsidiary of Food Machinery and Chemical Corporation, announce the new "Stokesfeed" Paper Box Making Machine.

This unit is the latest in paper box machinery for the set-up paper box industry and consists of the Model "HS" Wrapping Machine with the "Stokesfeed", the Model "405" Automatic Gluing Machine with Special Registering Conveyor.

The box wraps are automatically fed and glued and delivered on the conveyor. An inexperienced operator spots the stayed box blank on the glued wrap and the machine automatically feeds the box and wrap to the Wrapping Machine whete the box is automatically wrapped and ejected.

The unit is readily adjustable for a wide range of sizes and speeds up to 40 per minute can be obtained, so it is suitable for large or small runs.

Either regular tight-wrapped or extension edge work can be run with equal success.

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One of the many advantages in the "Stokesfeed" is that the actual handling of the box and wrap is similar to the standard method of hand feeding which has been in use for years, so the high quality of wrapping is maintained at higher speeds and lower costs.

Stokes and Smith Company, with fifty years experience in building machinery for the set-up paper box industry, feel confident that the "Stokesfeed" Unit is the answer to the box maker's need.

Activated Carbon Booklet

Vapor and liquid phase adsorbent applications of granular and pulverized activated carbons are discussed in a new 10-page booklet offered by Pittsburgh Coke & Chemical Company, Grant Building, Pittsburgh 19, Pa.

This booklet presents comparative advantages of using the two types of carbons and their various grades; cites typical examples of the uses of each type in decolorization, deodorization, purification, isolation, solvent recovery, gold recovery and catalyst and catalyst

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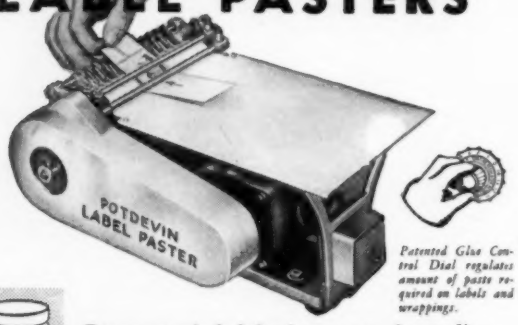

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Material Handling Handbook

Handbook of Material Handling with Industrial Trucks: A 72-page, practical guide for the analysis of material handling operations and the application of the unit-load method with power-operated industrial trucks and accessories, has just been published by the Electric Industrial Truck Association.

This book, entirely new in text, illustrations, charts and diagrams, together with engineering data, supplants the former Materials-Handling Handbook, also published by EITA, which ran through six editions and which was regarded as the standard authority on material handling practices employing industrial trucks.

Divided into four sections, the Handbook of Material Handling with Industrial Trucks contains: 1) The Evaluation of Industrial Truck Handling; 2) Material Handling Management, with sub-sections devoted to the preparation and use of flow process charts, handling operations in production, handling in storage, the use of unit loads in storage, with layouts, commodity and capacity factors, etc.; 3) The Organization of an Industrial Truck System and, 4) Practical Truck Engineering.

Sections of the book describe the different types of industrial trucks in use; their integration of operation with other material handling systems; unit load determinations and patterns; how to charge and to change storage batteries; how to keep battery records; how to measure handling costs; routing and dispatching methods, and how to train industrial truck operators.

Different types of skids, pallets and other load carriers are illustrated and described, while the book also contains pictures showing actual applications of industrial trucks in handling and storage operations in practically every kind of industry, including automotive, bottling, canning and ceramics down through the metal trades, the paper and printing and the rubber industries.

Single copies of the book are sold for $1.00, with special quantity prices on application. Executive officials of any industry of business, making application on company letterhead to The Electric Industrial Truck Association, Department P[x], 3701 North Broad Street, Philadelphia 40, Pa., will be supplied a copy of the Handbook with the compliments of EITA. This same offer of a courtesy copy is extended to deans and professors of engineering colleges and universities.

The Evyan Picture

(Continued from page 331)

conditions and comfort, from an intramural cafeteria to the serving of afternoon tea during a recess period of fifteen minutes at three o'clock when gossip and small talk are exchanged.

The designs for the packaging of the products are originated by Evyan and carry motifs of the rare antique laces from her fabulous collection. The gleam of delicately tinted satin frosted with frills of foamy lace provides appropriate and luxurious settings for jewel-bright flacons containing "White Shoulders," "Gay Diversion," Enchanting Menace," "Most Precious," and the latest fragrance to be introduced, "Golden Shadows."

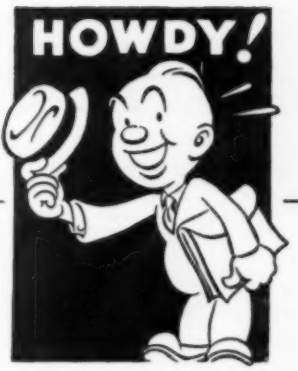
The photographs reproduced on pages 330 and 331 give a brief glimpse of the interior of the ultramodern plant. The left-hand column from top to bottom on page 330 shows a section of the immaculate mixing room, which contains imposing rows of glasslined stainless steel mixing and storing vats, filters and refrigerators. Here, after processing, the blends are pumped into packaging department, appearing below, where the colognes are bottled by machine. Caps are placed on the bottles by hand, then run on a conveyor ribbon through a tightening machine by which all containers are uniformly topped. The labels are set on the bottles by machine, as illustrated, at the rate of 27,000 per day by a single operator. The photographs in the lower left-hand corner show two processes of the wrapping, the fishskin inner wrapping, which is done by hand, and the machine sealed outer covering.

The second column, from top to bottom, illustrates the section of the wrapping department where the essences are bottled on semi-automatic machines, and wrapped entirely by hand. Below, some of the operators chat over the teacups during recess. At the bottom is shown the sample table, at which samples of cologne are semi-automatically filled and packaged in miniature flacons.

Pictured at the top left on the following page is an interesting portion of Dr. Langer's office, highlighted with a portrait of Evyan. Directly beneath, a corner of Evyan's office is exposed, where, against a background of her antique desk of French marquetry, two exquisite lace shawls from her collection are grouped with the model of the package for "Golden Shadows" which was inspired by these laces. Her own mistress of decor, Evyan surrounds herself with shining crystal, both modern and ancient, the rich glow of the patine of antique woodcarving brought into sharp contrast with a punctuation of the modern mood in utility pieces, a flash of semi-precious stones molded into objects of art, some of her favorite Rubens, Etty, Lawrence, Westall, and Constable canvasses, silver services, and gigantic oriental rug . . . all drawn together in harmonious assembly.

In the upper righthand corner appears a part of the reception room, called by Evyan the "Most Precious" Room. Here, again, antiques in the French manner prevail, with a staccato accent of the modern.

Below, Dr. Langer is caught at his desk in the laboratory, his sanctum sanctorum, where all Parfums Evyan receive their origin. He alone has access to this important department and he exclusively is responsible for its function.



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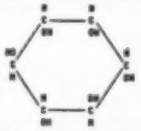

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